

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

RED-HILL
Quarterly

JOB NUMBER

380-103819-1

Eurofins Eaton Analytical Pomona

Job Notes

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

Compliance Statement

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

Authorization



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Definitions/Glossary

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

Job ID: 380-103819-1
SDG: Quarterly

Qualifiers

GC/MS 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/MS VOA TICs

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

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control 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.

GC/MS Semi VOA TICs

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

GC Semi VOA

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

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

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.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"

Definitions/Glossary

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

Job ID: 380-103819-1
SDG: Quarterly

Glossary (Continued)

Abbreviation **These commonly used abbreviations may or may not be present in this report.**

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

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Case Narrative

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

Job ID: 380-103819-1

Job ID: 380-103819-1

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Job Narrative 380-103819-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 7/12/2024 10:18 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.1°C, 2.4°C and 3.3°C.

Receipt Exceptions

One of the Ethanol vials from site Aiea Gulch Wells Pump 2 was received broken.

GC/MS VOA

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

GC/MS Semi VOA

Method 625.1_SIM: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 570-460222 and analytical batch 570-465376 recovered outside control limits for the following analyte(s): 3-Nitroaniline, 4-Chloroaniline, Aniline and Benzidine. 3-Nitroaniline, 4-Chloroaniline, Aniline and Benzidine have been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Method 625.1_SIM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 570-460222 and analytical batch 570-465376 recovered outside control limits for the following analytes: 3-Nitroaniline and Aniline.

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: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-460900. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

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

GC Semi VOA

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

Hydrocarbons

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

Pesticides/PCBs

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

HPLC/IC

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

Eurofins Eaton Analytical Pomona

Case Narrative

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

Job ID: 380-103819-1

Job ID: 380-103819-1 (Continued)

Eurofins Eaton Analytical Pomona

Metals

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

General Chemistry

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

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Detection Summary

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

Job ID: 380-103819-1
 SDG: Quarterly

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-103819-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Tertiary Butyl Alcohol (TBA)	2.2		2.0	ug/L	1		524.2	Total/NA
Bromide	260		5.0	ug/L	1		300.0	Total/NA
Chloride	99		2.5	mg/L	5		300.0	Total/NA
Nitrate as N	0.57		0.25	mg/L	5		300.0	Total/NA
Sulfate	14		1.3	mg/L	5		300.0	Total/NA
Calcium	24		1.0	mg/L	1		200.7 Rev 4.4	Total/NA
Magnesium	19		0.10	mg/L	1		200.7 Rev 4.4	Total/NA
Potassium	2.4		1.0	mg/L	1		200.7 Rev 4.4	Total/NA
Sodium	34		1.0	mg/L	1		200.7 Rev 4.4	Total/NA
Chromium	1.9		1.0	ug/L	1		200.8	Total/NA
Copper	3.5		2.0	ug/L	1		200.8	Total/NA
Alkalinity	52		2.0	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	52		2.0	mg/L	1		SM 2320B	Total/NA
Specific Conductance	460		2.0	umhos/cm	1		SM 2510B	Total/NA
Total Dissolved Solids	320		20	mg/L	1		SM 2540C	Total/NA
pH	7.9	HF		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-103819-2

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-103819-1

Date Collected: 07/11/24 10:03

Matrix: Drinking Water

Date Received: 07/12/24 10:18

Method: EPA-DW 524.2 - Total Trihalomethanes

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Trihalomethanes, Total	<0.50		0.50	ug/L			07/18/24 12:36	1

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tertiary Butyl Alcohol (TBA)	2.2		2.0	ug/L			07/17/24 19:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		07/17/24 19:20	1
4-Bromofluorobenzene (Surr)	97		70 - 130		07/17/24 19:20	1
1,2-Dichloroethane-d4 (Surr)	102		70 - 130		07/17/24 19:20	1

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L			07/18/24 12:36	1
1,1,1-Trichloroethane	<0.50		0.50	ug/L			07/18/24 12:36	1
1,1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L			07/18/24 12:36	1
1,1,2-Trichloroethane	<0.50		0.50	ug/L			07/18/24 12:36	1
1,1-Dichloroethylene	<0.50		0.50	ug/L			07/18/24 12:36	1
1,1-Dichloroethane	<0.50		0.50	ug/L			07/18/24 12:36	1
1,1-Dichloropropene	<0.50		0.50	ug/L			07/18/24 12:36	1
1,2,3-Trichlorobenzene	<0.50		0.50	ug/L			07/18/24 12:36	1
1,2,3-Trichloropropane	<0.50		0.50	ug/L			07/18/24 12:36	1
1,2,4-Trichlorobenzene	<0.50		0.50	ug/L			07/18/24 12:36	1
1,2,4-Trimethylbenzene	<0.50		0.50	ug/L			07/18/24 12:36	1
1,2-Dichloroethane	<0.50		0.50	ug/L			07/18/24 12:36	1
1,2-Dichloropropane	<0.50		0.50	ug/L			07/18/24 12:36	1
1,3,5-Trimethylbenzene	<0.50		0.50	ug/L			07/18/24 12:36	1
1,3-Dichloropropane	<0.50		0.50	ug/L			07/18/24 12:36	1
1,3-Dichloropropene, Total	<0.50		0.50	ug/L			07/18/24 12:36	1
2,2-Dichloropropane	<0.50		0.50	ug/L			07/18/24 12:36	1
2-Butanone (MEK)	<5.0		5.0	ug/L			07/18/24 12:36	1
4-Methyl-2-pentanone (MIBK)	<5.0		5.0	ug/L			07/18/24 12:36	1
Acetone	<500		500	ug/L			07/18/24 12:36	1
Benzene	<0.50		0.50	ug/L			07/18/24 12:36	1
Bromobenzene	<0.50		0.50	ug/L			07/18/24 12:36	1
Bromochloromethane	<0.50		0.50	ug/L			07/18/24 12:36	1
Bromodichloromethane	<0.50		0.50	ug/L			07/18/24 12:36	1
Bromoethane	<0.50		0.50	ug/L			07/18/24 12:36	1
Bromoform	<0.50		0.50	ug/L			07/18/24 12:36	1
Bromomethane (Methyl Bromide)	<0.50		0.50	ug/L			07/18/24 12:36	1
Carbon disulfide	<0.50		0.50	ug/L			07/18/24 12:36	1
Carbon tetrachloride	<0.50		0.50	ug/L			07/18/24 12:36	1
Chlorobenzene	<0.50		0.50	ug/L			07/18/24 12:36	1
Chlorodibromomethane	<0.50		0.50	ug/L			07/18/24 12:36	1
Chloroethane	<0.50		0.50	ug/L			07/18/24 12:36	1
Chloroform (Trichloromethane)	<0.50		0.50	ug/L			07/18/24 12:36	1
Chloromethane (methyl chloride)	<0.50		0.50	ug/L			07/18/24 12:36	1
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L			07/18/24 12:36	1
cis-1,3-Dichloropropene	<0.50		0.50	ug/L			07/18/24 12:36	1
Dibromomethane	<0.50		0.50	ug/L			07/18/24 12:36	1

Client Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-103819-1

Date Collected: 07/11/24 10:03

Matrix: Drinking Water

Date Received: 07/12/24 10:18

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	<0.50		0.50	ug/L			07/18/24 12:36	1
Dichloromethane	<0.50		0.50	ug/L			07/18/24 12:36	1
Diisopropyl ether	<3.0		3.0	ug/L			07/18/24 12:36	1
Ethylbenzene	<0.50		0.50	ug/L			07/18/24 12:36	1
Hexachlorobutadiene	<0.50		0.50	ug/L			07/18/24 12:36	1
Isopropylbenzene	<0.50		0.50	ug/L			07/18/24 12:36	1
m,p-Xylenes	<0.50		0.50	ug/L			07/18/24 12:36	1
m-Dichlorobenzene (1,3-DCB)	<0.50		0.50	ug/L			07/18/24 12:36	1
Methyl-tert-butyl Ether (MTBE)	<0.50		0.50	ug/L			07/18/24 12:36	1
Naphthalene	<0.50		0.50	ug/L			07/18/24 12:36	1
n-Butylbenzene	<0.50		0.50	ug/L			07/18/24 12:36	1
N-Propylbenzene	<0.50		0.50	ug/L			07/18/24 12:36	1
o-Chlorotoluene	<0.50		0.50	ug/L			07/18/24 12:36	1
o-Dichlorobenzene (1,2-DCB)	<0.50		0.50	ug/L			07/18/24 12:36	1
o-Xylene	<0.50		0.50	ug/L			07/18/24 12:36	1
p-Chlorotoluene	<0.50		0.50	ug/L			07/18/24 12:36	1
p-Dichlorobenzene (1,4-DCB)	<0.50		0.50	ug/L			07/18/24 12:36	1
p-Isopropyltoluene	<0.50		0.50	ug/L			07/18/24 12:36	1
sec-Butylbenzene	<0.50		0.50	ug/L			07/18/24 12:36	1
Styrene	<0.50		0.50	ug/L			07/18/24 12:36	1
Tert-amyl methyl ether	<3.0		3.0	ug/L			07/18/24 12:36	1
Tert-butyl ethyl ether	<3.0		3.0	ug/L			07/18/24 12:36	1
tert-Butylbenzene	<0.50		0.50	ug/L			07/18/24 12:36	1
Tetrachloroethene (PCE)	<0.50		0.50	ug/L			07/18/24 12:36	1
Toluene	<0.50		0.50	ug/L			07/18/24 12:36	1
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L			07/18/24 12:36	1
trans-1,3-Dichloropropene	<0.50		0.50	ug/L			07/18/24 12:36	1
Trichloroethylene (TCE)	<0.50		0.50	ug/L			07/18/24 12:36	1
Trichlorofluoromethane (Freon 11)	<0.50		0.50	ug/L			07/18/24 12:36	1
Trichlorotrifluoroethane	<0.50		0.50	ug/L			07/18/24 12:36	1
Vinyl Chloride (VC)	<0.30		0.30	ug/L			07/18/24 12:36	1
Xylenes, Total	<0.50		0.50	ug/L			07/18/24 12:36	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A		07/18/24 12:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		70 - 130		07/18/24 12:36	1
4-Bromofluorobenzene (Surr)	96		70 - 130		07/18/24 12:36	1
Toluene-d8 (Surr)	111		70 - 130		07/18/24 12:36	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
2,4'-DDE	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
2,4'-DDT	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
2,4-Dinitrotoluene	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
2,6-Dinitrotoluene	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
4,4'-DDD	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
4,4'-DDE	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-103819-1

Date Collected: 07/11/24 10:03

Matrix: Drinking Water

Date Received: 07/12/24 10:18

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDT	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Acenaphthene	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Acenaphthylene	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Acetochlor	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Alachlor	<0.049		0.049	ug/L		07/15/24 12:15	07/16/24 17:48	1
alpha-BHC	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
alpha-Chlordane	<0.049		0.049	ug/L		07/15/24 12:15	07/16/24 17:48	1
Anthracene	<0.020		0.020	ug/L		07/15/24 12:15	07/16/24 17:48	1
Atrazine	<0.049		0.049	ug/L		07/15/24 12:15	07/16/24 17:48	1
Benz(a)anthracene	<0.049		0.049	ug/L		07/15/24 12:15	07/16/24 17:48	1
Benzo[a]pyrene	<0.020		0.020	ug/L		07/15/24 12:15	07/16/24 17:48	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		07/15/24 12:15	07/16/24 17:48	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		07/15/24 12:15	07/16/24 17:48	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		07/15/24 12:15	07/16/24 17:48	1
beta-BHC	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		07/15/24 12:15	07/16/24 17:48	1
Aldrin	<0.0098		0.0098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Bromacil	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Butachlor	<0.049		0.049	ug/L		07/15/24 12:15	07/16/24 17:48	1
Butylbenzylphthalate	<0.49		0.49	ug/L		07/15/24 12:15	07/16/24 17:48	1
Chlorobenzilate	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Chloroneb	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Chlorpyrifos	<0.049		0.049	ug/L		07/15/24 12:15	07/16/24 17:48	1
Chrysene	<0.020		0.020	ug/L		07/15/24 12:15	07/16/24 17:48	1
delta-BHC	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		07/15/24 12:15	07/16/24 17:48	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		07/15/24 12:15	07/16/24 17:48	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		07/15/24 12:15	07/16/24 17:48	1
Dieldrin	<0.0098		0.0098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Diethylphthalate	<0.49		0.49	ug/L		07/15/24 12:15	07/16/24 17:48	1
Dimethylphthalate	<0.49		0.49	ug/L		07/15/24 12:15	07/16/24 17:48	1
Di-n-butyl phthalate	<0.98		0.98	ug/L		07/15/24 12:15	07/16/24 17:48	1
Di-n-octyl phthalate	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Endosulfan I (Alpha)	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Endosulfan II (Beta)	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Endosulfan sulfate	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Endrin	<0.0098		0.0098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Endrin aldehyde	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
EPTC	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Fluoranthene	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Fluorene	<0.049		0.049	ug/L		07/15/24 12:15	07/16/24 17:48	1
gamma-BHC (Lindane)	<0.0098		0.0098	ug/L		07/15/24 12:15	07/16/24 17:48	1
gamma-Chlordane	<0.049		0.049	ug/L		07/15/24 12:15	07/16/24 17:48	1
Heptachlor	<0.0098		0.0098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Heptachlor epoxide (isomer B)	<0.0098		0.0098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Hexachlorobenzene	<0.049		0.049	ug/L		07/15/24 12:15	07/16/24 17:48	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		07/15/24 12:15	07/16/24 17:48	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		07/15/24 12:15	07/16/24 17:48	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-103819-1

Date Collected: 07/11/24 10:03

Matrix: Drinking Water

Date Received: 07/12/24 10:18

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Isophorone	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Malathion	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Methoxychlor	<0.049	^3+	0.049	ug/L		07/15/24 12:15	07/16/24 17:48	1
Metolachlor	<0.049		0.049	ug/L		07/15/24 12:15	07/16/24 17:48	1
Molinate	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Naphthalene	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Parathion	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Pendimethalin (Penoxaline)	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Phenanthrene	<0.039		0.039	ug/L		07/15/24 12:15	07/16/24 17:48	1
Propachlor	<0.049		0.049	ug/L		07/15/24 12:15	07/16/24 17:48	1
Pyrene	<0.049		0.049	ug/L		07/15/24 12:15	07/16/24 17:48	1
Simazine	<0.049		0.049	ug/L		07/15/24 12:15	07/16/24 17:48	1
Terbacil	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Terbutylazine	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Thiobencarb	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		07/15/24 12:15	07/16/24 17:48	1
trans-Nonachlor	<0.049		0.049	ug/L		07/15/24 12:15	07/16/24 17:48	1
Trifluralin	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
1-Methylnaphthalene	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1
2-Methylnaphthalene	<0.098		0.098	ug/L		07/15/24 12:15	07/16/24 17:48	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	07/15/24 12:15	07/16/24 17:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	92		70 - 130	07/15/24 12:15	07/16/24 17:48	1
Perylene-d12	97		70 - 130	07/15/24 12:15	07/16/24 17:48	1
Triphenylphosphate	98		70 - 130	07/15/24 12:15	07/16/24 17:48	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
2,4,5-Trichlorophenol	<4.9		4.9	ug/L		07/15/24 05:12	08/02/24 13:47	1
2,4,6-Trichlorophenol	<0.97		0.97	ug/L		07/15/24 05:12	08/02/24 13:47	1
2,4-Dichlorophenol	<0.97		0.97	ug/L		07/15/24 05:12	08/02/24 13:47	1
2,4-Dinitrophenol	<4.9		4.9	ug/L		07/15/24 05:12	08/02/24 13:47	1
2,6-Dichlorophenol	<4.9		4.9	ug/L		07/15/24 05:12	08/02/24 13:47	1
2-Chloronaphthalene	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
2-Chlorophenol	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
2-Methylnaphthalene	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
2-Methylphenol	<0.97		0.97	ug/L		07/15/24 05:12	08/02/24 13:47	1
2-Nitroaniline	<4.9		4.9	ug/L		07/15/24 05:12	08/02/24 13:47	1
2-Nitrophenol	<4.9		4.9	ug/L		07/15/24 05:12	08/02/24 13:47	1
3/4-Methylphenol	<1.9		1.9	ug/L		07/15/24 05:12	08/02/24 13:47	1
3-Nitroaniline	<4.9	*- *1	4.9	ug/L		07/15/24 05:12	08/02/24 13:47	1
4,6-Dinitro-2-methylphenol	<4.9		4.9	ug/L		07/15/24 05:12	08/02/24 13:47	1
4-Bromophenyl phenyl ether	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
4-Chloro-3-methylphenol	<0.97		0.97	ug/L		07/15/24 05:12	08/02/24 13:47	1
4-Chloroaniline	<4.9	*-	4.9	ug/L		07/15/24 05:12	08/02/24 13:47	1
4-Chlorophenyl phenyl ether	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-103819-1

Date Collected: 07/11/24 10:03

Matrix: Drinking Water

Date Received: 07/12/24 10:18

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitroaniline	<4.9		4.9	ug/L		07/15/24 05:12	08/02/24 13:47	1
4-Nitrophenol	<4.9		4.9	ug/L		07/15/24 05:12	08/02/24 13:47	1
Acenaphthene	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Acenaphthylene	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Aniline	<0.19	*- *1	0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Anthracene	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Benzidine	<4.9	*-	4.9	ug/L		07/15/24 05:12	08/02/24 13:47	1
Benzo[a]anthracene	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Benzo[a]pyrene	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Benzo[b]fluoranthene	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Benzo[g,h,i]perylene	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Benzo[k]fluoranthene	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Benzoic acid	<9.7		9.7	ug/L		07/15/24 05:12	08/02/24 13:47	1
Benzyl alcohol	<0.97		0.97	ug/L		07/15/24 05:12	08/02/24 13:47	1
Bis(2-chloroethoxy)methane	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Bis(2-chloroethyl)ether	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
bis (2-Chloroisopropyl) ether	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Chrysene	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Dibenz(a,h)anthracene	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Dibenzofuran	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Fluoranthene	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Fluorene	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Hexachloroethane	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Naphthalene	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Nitrobenzene	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
N-Nitrosodi-n-propylamine	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
N-Nitrosodiphenylamine	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Pentachlorophenol	<0.97		0.97	ug/L		07/15/24 05:12	08/02/24 13:47	1
Phenanthrene	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1
Phenol	<0.97		0.97	ug/L		07/15/24 05:12	08/02/24 13:47	1
Pyrene	<0.19		0.19	ug/L		07/15/24 05:12	08/02/24 13:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	57		28 - 127	07/15/24 05:12	08/02/24 13:47	1
2-Fluorobiphenyl (Surr)	63		31 - 120	07/15/24 05:12	08/02/24 13:47	1
2-Fluorophenol (Surr)	46		17 - 120	07/15/24 05:12	08/02/24 13:47	1
Nitrobenzene-d5 (Surr)	74		27 - 120	07/15/24 05:12	08/02/24 13:47	1
Phenol-d6 (Surr)	29		10 - 120	07/15/24 05:12	08/02/24 13:47	1
p-Terphenyl-d14 (Surr)	67		45 - 120	07/15/24 05:12	08/02/24 13:47	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
Cyclohexane, 1-methyl-2-propyl-	29	T J N	ug/L		3.03	4291-79-6	07/15/24 05:12	08/02/24 20:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	55		33 - 139	07/15/24 05:12	08/02/24 20:53	1
2-Fluorobiphenyl (Surr)	73		33 - 126	07/15/24 05:12	08/02/24 20:53	1
2-Fluorophenol (Surr)	42		12 - 120	07/15/24 05:12	08/02/24 20:53	1
Nitrobenzene-d5 (Surr)	66		36 - 120	07/15/24 05:12	08/02/24 20:53	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-103819-1

Date Collected: 07/11/24 10:03

Matrix: Drinking Water

Date Received: 07/12/24 10:18

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Phenol-d6 (Surr)	25		10 - 120	07/15/24 05:12	08/02/24 20:53	1
p-Terphenyl-d14 (Surr)	84		47 - 131	07/15/24 05:12	08/02/24 20:53	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			07/17/24 00:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		38 - 134		07/17/24 00:28	1

Method: EPA-DW2 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	<0.020		0.020	ug/L		07/18/24 15:00	07/18/24 23:48	1
1,2-Dibromo-3-Chloropropane	<0.010		0.010	ug/L		07/18/24 15:00	07/18/24 23:48	1
1,2-Dibromoethane	<0.010		0.010	ug/L		07/18/24 15:00	07/18/24 23:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane (Surr)	96		60 - 140	07/18/24 15:00	07/18/24 23:48	1

Method: EPA 505 - Organochlorine Pesticides/PCBs (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene	<0.51		0.51	ug/L		07/16/24 14:20	07/17/24 00:43	1
Chlordane (n.o.s.)	<0.10		0.10	ug/L		07/16/24 14:20	07/17/24 00:43	1
PCB-1016	<0.071		0.071	ug/L		07/16/24 14:20	07/17/24 00:43	1
PCB-1221	<0.10		0.10	ug/L		07/16/24 14:20	07/17/24 00:43	1
PCB-1232	<0.10		0.10	ug/L		07/16/24 14:20	07/17/24 00:43	1
PCB-1242	<0.10		0.10	ug/L		07/16/24 14:20	07/17/24 00:43	1
PCB-1248	<0.10		0.10	ug/L		07/16/24 14:20	07/17/24 00:43	1
PCB-1254	<0.10		0.10	ug/L		07/16/24 14:20	07/17/24 00:43	1
PCB-1260	<0.071		0.071	ug/L		07/16/24 14:20	07/17/24 00:43	1
Polychlorinated biphenyls, Total	<0.10		0.10	ug/L		07/16/24 14:20	07/17/24 00:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	101		70 - 130	07/16/24 14:20	07/17/24 00:43	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<26		26	ug/L		07/16/24 16:05	07/20/24 15:15	1
Motor Oil Range Organics [C24-C36]	<26		26	ug/L		07/16/24 16:05	07/20/24 15:15	1
C8-C18	<26		26	ug/L		07/16/24 16:05	07/20/24 15:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	96		60 - 130	07/16/24 16:05	07/20/24 15:15	1

Method: SW846 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<0.10		0.10	mg/L			07/15/24 21:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Hexafluoro-2-propanol (Surr)	86		54 - 120		07/15/24 21:02	1

Client Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-103819-1

Date Collected: 07/11/24 10:03

Matrix: Drinking Water

Date Received: 07/12/24 10:18

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	260		5.0	ug/L			07/18/24 04:18	1
Chloride	99		2.5	mg/L			07/12/24 19:58	5
Nitrate as N	0.57		0.25	mg/L			07/12/24 19:58	5
Nitrite as N	<0.25		0.25	mg/L			07/12/24 19:58	5
Sulfate	14		1.3	mg/L			07/12/24 19:58	5

Method: EPA 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	24		1.0	mg/L			07/15/24 23:52	1
Magnesium	19		0.10	mg/L			07/15/24 23:52	1
Potassium	2.4		1.0	mg/L			07/15/24 23:52	1
Sodium	34		1.0	mg/L			07/15/24 23:52	1

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		1.0	ug/L			07/15/24 16:40	1
Arsenic	<1.0		1.0	ug/L			07/15/24 16:40	1
Beryllium	<1.0		1.0	ug/L			07/15/24 16:40	1
Cadmium	<0.50		0.50	ug/L			07/15/24 16:40	1
Chromium	1.9		1.0	ug/L			07/15/24 16:40	1
Copper	3.5		2.0	ug/L			07/15/24 16:40	1
Lead	<0.50		0.50	ug/L			07/15/24 16:40	1
Nickel	<5.0		5.0	ug/L			07/15/24 16:40	1
Selenium	<5.0		5.0	ug/L			07/15/24 16:40	1
Silver	<0.50		0.50	ug/L			07/15/24 16:40	1
Thallium	<1.0		1.0	ug/L			07/15/24 16:40	1
Zinc	<20		20	ug/L			07/15/24 16:40	1

Method: EPA 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.10		0.10	ug/L		07/17/24 12:24	07/17/24 18:39	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	52		2.0	mg/L			07/18/24 19:02	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	52		2.0	mg/L			07/18/24 19:02	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<2.0		2.0	mg/L			07/18/24 19:02	1
Specific Conductance (SM 2510B)	460		2.0	umhos/cm			07/18/24 19:02	1
Total Dissolved Solids (SM 2540C)	320		20	mg/L			07/16/24 15:19	1
Fluoride (SM 4500 F C)	<0.050		0.050	mg/L			07/19/24 17:17	1
pH (SM 4500 H+ B)	7.9	HF		SU			07/18/24 19:02	1
Sulfide (SM 4500 S2 D)	<0.050		0.050	mg/L			07/12/24 15:49	1

Client Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-103819-2

Date Collected: 07/11/24 10:03

Matrix: Water

Date Received: 07/12/24 10:18

Method: EPA-DW 524.2 - Total Trihalomethanes

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Trihalomethanes, Total	<0.50		0.50	ug/L			07/18/24 13:00	1

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tertiary Butyl Alcohol (TBA)	<2.0		2.0	ug/L			07/17/24 19:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		70 - 130		07/17/24 19:42	1
4-Bromofluorobenzene (Surr)	102		70 - 130		07/17/24 19:42	1
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		07/17/24 19:42	1

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L			07/18/24 13:00	1
1,1,1-Trichloroethane	<0.50		0.50	ug/L			07/18/24 13:00	1
1,1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L			07/18/24 13:00	1
1,1,2-Trichloroethane	<0.50		0.50	ug/L			07/18/24 13:00	1
1,1-Dichloroethane	<0.50		0.50	ug/L			07/18/24 13:00	1
1,1-Dichlorethylene	<0.50		0.50	ug/L			07/18/24 13:00	1
1,1-Dichloropropene	<0.50		0.50	ug/L			07/18/24 13:00	1
1,2,3-Trichlorobenzene	<0.50		0.50	ug/L			07/18/24 13:00	1
1,2,3-Trichloropropane	<0.50		0.50	ug/L			07/18/24 13:00	1
1,2,4-Trichlorobenzene	<0.50		0.50	ug/L			07/18/24 13:00	1
1,2,4-Trimethylbenzene	<0.50		0.50	ug/L			07/18/24 13:00	1
1,2-Dichloroethane	<0.50		0.50	ug/L			07/18/24 13:00	1
1,2-Dichloropropane	<0.50		0.50	ug/L			07/18/24 13:00	1
1,3,5-Trimethylbenzene	<0.50		0.50	ug/L			07/18/24 13:00	1
1,3-Dichloropropane	<0.50		0.50	ug/L			07/18/24 13:00	1
2,2-Dichloropropane	<0.50		0.50	ug/L			07/18/24 13:00	1
2-Butanone (MEK)	<5.0		5.0	ug/L			07/18/24 13:00	1
4-Methyl-2-pentanone (MIBK)	<5.0		5.0	ug/L			07/18/24 13:00	1
Acetone	<500		500	ug/L			07/18/24 13:00	1
Benzene	<0.50		0.50	ug/L			07/18/24 13:00	1
Bromobenzene	<0.50		0.50	ug/L			07/18/24 13:00	1
Bromochloromethane	<0.50		0.50	ug/L			07/18/24 13:00	1
Bromodichloromethane	<0.50		0.50	ug/L			07/18/24 13:00	1
Bromoform	<0.50		0.50	ug/L			07/18/24 13:00	1
Bromomethane (Methyl Bromide)	<0.50		0.50	ug/L			07/18/24 13:00	1
Carbon disulfide	<0.50		0.50	ug/L			07/18/24 13:00	1
Carbon tetrachloride	<0.50		0.50	ug/L			07/18/24 13:00	1
Chlorobenzene	<0.50		0.50	ug/L			07/18/24 13:00	1
Chlorodibromomethane	<0.50		0.50	ug/L			07/18/24 13:00	1
Chloroethane	<0.50		0.50	ug/L			07/18/24 13:00	1
Chloroform (Trichloromethane)	<0.50		0.50	ug/L			07/18/24 13:00	1
Dichloromethane	<0.50		0.50	ug/L			07/18/24 13:00	1
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L			07/18/24 13:00	1
cis-1,3-Dichloropropene	<0.50		0.50	ug/L			07/18/24 13:00	1
Dibromomethane	<0.50		0.50	ug/L			07/18/24 13:00	1
Dichlorodifluoromethane	<0.50		0.50	ug/L			07/18/24 13:00	1
Ethylbenzene	<0.50		0.50	ug/L			07/18/24 13:00	1

Client Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-103819-2

Date Collected: 07/11/24 10:03

Matrix: Water

Date Received: 07/12/24 10:18

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	<0.50		0.50	ug/L			07/18/24 13:00	1
Isopropylbenzene	<0.50		0.50	ug/L			07/18/24 13:00	1
m,p-Xylenes	<0.50		0.50	ug/L			07/18/24 13:00	1
m-Dichlorobenzene (1,3-DCB)	<0.50		0.50	ug/L			07/18/24 13:00	1
Methyl-tert-butyl Ether (MTBE)	<0.50		0.50	ug/L			07/18/24 13:00	1
Naphthalene	<0.50		0.50	ug/L			07/18/24 13:00	1
n-Butylbenzene	<0.50		0.50	ug/L			07/18/24 13:00	1
N-Propylbenzene	<0.50		0.50	ug/L			07/18/24 13:00	1
o-Dichlorobenzene (1,2-DCB)	<0.50		0.50	ug/L			07/18/24 13:00	1
o-Chlorotoluene	<0.50		0.50	ug/L			07/18/24 13:00	1
o-Xylene	<0.50		0.50	ug/L			07/18/24 13:00	1
p-Chlorotoluene	<0.50		0.50	ug/L			07/18/24 13:00	1
p-Dichlorobenzene (1,4-DCB)	<0.50		0.50	ug/L			07/18/24 13:00	1
p-Isopropyltoluene	<0.50		0.50	ug/L			07/18/24 13:00	1
sec-Butylbenzene	<0.50		0.50	ug/L			07/18/24 13:00	1
Styrene	<0.50		0.50	ug/L			07/18/24 13:00	1
Tert-amyl methyl ether	<3.0		3.0	ug/L			07/18/24 13:00	1
Tert-butyl ethyl ether	<3.0		3.0	ug/L			07/18/24 13:00	1
tert-Butylbenzene	<0.50		0.50	ug/L			07/18/24 13:00	1
Tetrachloroethene (PCE)	<0.50		0.50	ug/L			07/18/24 13:00	1
Toluene	<0.50		0.50	ug/L			07/18/24 13:00	1
1,3-Dichloropropene, Total	<0.50		0.50	ug/L			07/18/24 13:00	1
Xylenes, Total	<0.50		0.50	ug/L			07/18/24 13:00	1
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L			07/18/24 13:00	1
trans-1,3-Dichloropropene	<0.50		0.50	ug/L			07/18/24 13:00	1
Trichloroethylene (TCE)	<0.50		0.50	ug/L			07/18/24 13:00	1
Trichlorofluoromethane (Freon 11)	<0.50		0.50	ug/L			07/18/24 13:00	1
Vinyl Chloride (VC)	<0.30		0.30	ug/L			07/18/24 13:00	1
Trichlorotrifluoroethane	<0.50		0.50	ug/L			07/18/24 13:00	1
Bromoethane	<0.50		0.50	ug/L			07/18/24 13:00	1
Chloromethane (methyl chloride)	<0.50		0.50	ug/L			07/18/24 13:00	1
Diisopropyl ether	<3.0		3.0	ug/L			07/18/24 13:00	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	8.5	T J	ug/L		9.18	N/A		07/18/24 13:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 130		07/18/24 13:00	1
4-Bromofluorobenzene (Surr)	94		70 - 130		07/18/24 13:00	1
Toluene-d8 (Surr)	107		70 - 130		07/18/24 13:00	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			07/16/24 23:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		38 - 134		07/16/24 23:10	1

Method: EPA-DW2 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	<0.020		0.020	ug/L		07/24/24 12:00	07/25/24 00:46	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-103819-1
 SDG: Quarterly

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-103819-2

Date Collected: 07/11/24 10:03

Matrix: Water

Date Received: 07/12/24 10:18

Method: EPA-DW2 504.1 - EDB, DBCP and 1,2,3-TCP (GC) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	<0.010		0.010	ug/L		07/24/24 12:00	07/25/24 00:46	1
1,2-Dibromoethane	<0.010		0.010	ug/L		07/24/24 12:00	07/25/24 00:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dibromopropane (Surr)	97		60 - 140			07/24/24 12:00	07/25/24 00:46	1

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Action Limit Summary

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

Job ID: 380-103819-1
SDG: Quarterly

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-103819-1

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	HI Org Limit	EPAMCL Limit	EPAMCL S Limit	Method	Prep Type
Trihalomethanes, Total	<0.50		ug/L		80		524.2	Total/NA
1,1,1-Trichloroethane	<0.50		ug/L	200.0	200		524.2	Total/NA
1,1,2-Trichloroethane	<0.50		ug/L	5.000	5		524.2	Total/NA
1,1-Dichloroethylene	<0.50		ug/L	7.000	7		524.2	Total/NA
1,2,3-Trichloropropane	<0.50		ug/L	0.6000			524.2	Total/NA
1,2,4-Trichlorobenzene	<0.50		ug/L	70.00	70		524.2	Total/NA
1,2-Dichloroethane	<0.50		ug/L	5.000	5		524.2	Total/NA
1,2-Dichloropropane	<0.50		ug/L	5.000	5		524.2	Total/NA
Benzene	<0.50		ug/L	5.000	5		524.2	Total/NA
Carbon tetrachloride	<0.50		ug/L	5.000	5		524.2	Total/NA
Chlorobenzene	<0.50		ug/L	100.0	100		524.2	Total/NA
cis-1,2-Dichloroethylene	<0.50		ug/L	70.00	70		524.2	Total/NA
Dichloromethane	<0.50		ug/L	5.000	5		524.2	Total/NA
Ethylbenzene	<0.50		ug/L	700.0	700		524.2	Total/NA
o-Dichlorobenzene (1,2-DCB)	<0.50		ug/L	600.0	600		524.2	Total/NA
p-Dichlorobenzene (1,4-DCB)	<0.50		ug/L	75.000	75		524.2	Total/NA
Styrene	<0.50		ug/L	100.0	100		524.2	Total/NA
Tetrachloroethene (PCE)	<0.50		ug/L	5.000	5		524.2	Total/NA
Toluene	<0.50		ug/L	1000	1000		524.2	Total/NA
trans-1,2-Dichloroethylene	<0.50		ug/L	100.0	100		524.2	Total/NA
Trichloroethylene (TCE)	<0.50		ug/L	5.000	5		524.2	Total/NA
Vinyl Chloride (VC)	<0.30		ug/L	2.000	2		524.2	Total/NA
Xylenes, Total	<0.50		ug/L	10000	10000		524.2	Total/NA
Alachlor	<0.049		ug/L		2		525.2	Total/NA
Atrazine	<0.049		ug/L		3		525.2	Total/NA
Benzo[a]pyrene	<0.020		ug/L		0.2		525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.59		ug/L		6		525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.59		ug/L		400		525.2	Total/NA
Endrin	<0.0098		ug/L		2		525.2	Total/NA
gamma-BHC (Lindane)	<0.0098		ug/L		0.2		525.2	Total/NA
Heptachlor	<0.0098		ug/L		0.4		525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.0098		ug/L		0.2		525.2	Total/NA
Hexachlorobenzene	<0.049		ug/L		1		525.2	Total/NA
Hexachlorocyclopentadiene	<0.049		ug/L		50		525.2	Total/NA
Methoxychlor	<0.049	^3+	ug/L		40		525.2	Total/NA
Simazine	<0.049		ug/L		4		525.2	Total/NA
Benzo[a]pyrene	<0.19		ug/L		0.2		625.1 SIM	Total/NA
Pentachlorophenol	<0.97		ug/L		1		625.1 SIM	Total/NA
1,2,3-Trichloropropane	<0.020		ug/L	0.6000			504.1	Total/NA
1,2-Dibromo-3-Chloropropane	<0.010		ug/L		0.2		504.1	Total/NA
1,2-Dibromoethane	<0.010		ug/L		0.05		504.1	Total/NA
Toxaphene	<0.51		ug/L		3		505	Total/NA
Chlordane (n.o.s.)	<0.10		ug/L		2		505	Total/NA
Polychlorinated biphenyls, Total	<0.10		ug/L		0.5		505	Total/NA
Chloride	99		mg/L			250	300.0	Total/NA
Nitrate as N	0.57		mg/L		10		300.0	Total/NA
Nitrite as N	<0.25		mg/L		1		300.0	Total/NA
Sulfate	14		mg/L			250	300.0	Total/NA

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-103819-1
SDG: Quarterly

Client Sample ID: AIEA GULCH WELLS PUMP 2 (Continued)

Lab Sample ID: 380-103819-1

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	HI Org	EPAMCL	EPAMCL	Method	Prep Type
				Limit	Limit	S Limit		
Antimony	<1.0		ug/L		6		200.8	Total/NA
Arsenic	<1.0		ug/L		10		200.8	Total/NA
Beryllium	<1.0		ug/L		4		200.8	Total/NA
Cadmium	<0.50		ug/L		5		200.8	Total/NA
Chromium	1.9		ug/L		100		200.8	Total/NA
Copper	3.5		ug/L			1000	200.8	Total/NA
Lead	<0.50		ug/L		15.000		200.8	Total/NA
Selenium	<5.0		ug/L		50		200.8	Total/NA
Silver	<0.50		ug/L			100	200.8	Total/NA
Thallium	<1.0		ug/L		2		200.8	Total/NA
Zinc	<20		ug/L			5000	200.8	Total/NA
Mercury	<0.10		ug/L		2		245.1	Total/NA
Total Dissolved Solids	320		mg/L			500	SM 2540C	Total/NA
Fluoride	<0.050		mg/L		4	2	SM 4500 F C	Total/NA
pH	7.9	HF	SU			6.5	SM 4500 H+ B	Total/NA

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-103819-2

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	HI Org	EPAMCL	RL	Method	Prep Type
				Limit	Limit			
Trihalomethanes, Total	<0.50		ug/L		80	0.50	524.2	Total/NA
1,1,1-Trichloroethane	<0.50		ug/L	200.0	200	0.50	524.2	Total/NA
1,1,2-Trichloroethane	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
1,1-Dichloroethylene	<0.50		ug/L	7.000	7	0.50	524.2	Total/NA
1,2,3-Trichloropropane	<0.50		ug/L	0.6000		0.50	524.2	Total/NA
1,2,4-Trichlorobenzene	<0.50		ug/L	70.00	70	0.50	524.2	Total/NA
1,2-Dichloroethane	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
1,2-Dichloropropane	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
Benzene	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
Carbon tetrachloride	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
Chlorobenzene	<0.50		ug/L	100.0	100	0.50	524.2	Total/NA
Dichloromethane	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
cis-1,2-Dichloroethylene	<0.50		ug/L	70.00	70	0.50	524.2	Total/NA
Ethylbenzene	<0.50		ug/L	700.0	700	0.50	524.2	Total/NA
o-Dichlorobenzene (1,2-DCB)	<0.50		ug/L	600.0	600	0.50	524.2	Total/NA
p-Dichlorobenzene (1,4-DCB)	<0.50		ug/L	75.000	75	0.50	524.2	Total/NA
Styrene	<0.50		ug/L	100.0	100	0.50	524.2	Total/NA
Tetrachloroethene (PCE)	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
Toluene	<0.50		ug/L	1000	1000	0.50	524.2	Total/NA
Xylenes, Total	<0.50		ug/L	10000	10000	0.50	524.2	Total/NA
trans-1,2-Dichloroethylene	<0.50		ug/L	100.0	100	0.50	524.2	Total/NA
Trichloroethylene (TCE)	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
Vinyl Chloride (VC)	<0.30		ug/L	2.000	2	0.30	524.2	Total/NA
1,2,3-Trichloropropane	<0.020		ug/L	0.6000		0.020	504.1	Total/NA

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-103819-1
SDG: Quarterly

Client Sample ID: TRAVEL BLANK (Continued)

Lab Sample ID: 380-103819-2

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	HI Org Limit	EPAMCL Limit	RL	Method	Prep Type
1,2-Dibromo-3-Chloropropane	<0.010		ug/L		0.2	0.010	504.1	Total/NA
1,2-Dibromoethane	<0.010		ug/L		0.05	0.010	504.1	Total/NA

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Surrogate Summary

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 524.2 - Volatile Organic Compounds (GC/MS SIM)

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		TOL (70-130)	BFB (70-130)	DCA (70-130)
380-103819-1	AIEA GULCH WELLS PUMP 2	95	97	102

Surrogate Legend
 TOL = Toluene-d8 (Surr)
 BFB = 4-Bromofluorobenzene (Surr)
 DCA = 1,2-Dichloroethane-d4 (Surr)

Method: 524.2 - Volatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		TOL (70-130)	BFB (70-130)	DCA (70-130)
380-103819-2	TRAVEL BLANK	97	102	101
LCS 380-99491/2	Lab Control Sample	98	95	103
LCS 380-99491/3	Lab Control Sample Dup	100	96	103
MB 380-99491/5	Method Blank	98	96	101

Surrogate Legend
 TOL = Toluene-d8 (Surr)
 BFB = 4-Bromofluorobenzene (Surr)
 DCA = 1,2-Dichloroethane-d4 (Surr)

Method: 524.2 - Volatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		TOL (50-150)	BFB (50-150)	DCA (50-150)
MRL 380-99491/4	Lab Control Sample	98	96	100

Surrogate Legend
 TOL = Toluene-d8 (Surr)
 BFB = 4-Bromofluorobenzene (Surr)
 DCA = 1,2-Dichloroethane-d4 (Surr)

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DCA (70-130)	BFB (70-130)	TOL (70-130)
380-103819-1	AIEA GULCH WELLS PUMP 2	99	96	111

Surrogate Legend
 DCA = 1,2-Dichloroethane-d4 (Surr)
 BFB = 4-Bromofluorobenzene (Surr)
 TOL = Toluene-d8 (Surr)

Surrogate Summary

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

Job ID: 380-103819-1
 SDG: Quarterly

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCA (70-130)	BFB (70-130)	TOL (70-130)
380-103819-2	TRAVEL BLANK	100	94	107
LCS 380-99494/5	Lab Control Sample	94	98	103
LCS 380-99547/3	Lab Control Sample	94	98	98
LCSD 380-99494/6	Lab Control Sample Dup	97	100	113
LCSD 380-99547/4	Lab Control Sample Dup	112	100	110
MB 380-99494/8	Method Blank	94	97	99
MB 380-99547/5	Method Blank	90	99	93
MRL 380-99494/3	Lab Control Sample	96	99	93
MRL 380-99494/4	Lab Control Sample	99	99	95

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

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

Matrix: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	2NMX (70-130)	PRY (70-130)	TPP (70-130)
380-103819-1	AIEA GULCH WELLS PUMP 2	92	97	98

Surrogate Legend

2NMX = 2-Nitro-m-xylene

PRY = Perylene-d12

TPP = Triphenylphosphate

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	2NMX (70-130)	PRY (70-130)	TPP (70-130)
380-103652-O-1-A MS	Matrix Spike	94	96	108
380-103673-O-1-A DU	Duplicate	93	94	102
LCS 380-99014/23-A	Lab Control Sample	101	101	105
LCSD 380-99014/24-A	Lab Control Sample Dup	100	95	102
MB 380-99014/21-A	Method Blank	92	90	107
MRL 380-99014/22-A	Lab Control Sample	93	91	103

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)

Lab Sample ID	Client Sample ID	TBP (33-139)	FBP (33-126)	2FP (12-120)	NBZ (36-120)	PHL6 (10-120)	TPHd14 (47-131)
380-103819-1	AIEA GULCH WELLS PUMP 2	55	73	42	66	25	84

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Surrogate Summary

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

Job ID: 380-103819-1
SDG: Quarterly

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (33-139)	FBP (33-126)	2FP (12-120)	NBZ (36-120)	PHL6 (10-120)	TPHd14 (47-131)
MB 570-460222/1-A	Method Blank	45	59	41	53	26	71

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (28-127)	FBP (31-120)	2FP (17-120)	NBZ (27-120)	PHL6 (10-120)	TPHd14 (45-120)
380-103819-1	AIEA GULCH WELLS PUMP 2	57	63	46	74	29	67

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (28-127)	FBP (31-120)	2FP (17-120)	NBZ (27-120)	PHL6 (10-120)	TPHd14 (45-120)
LCS 570-460222/2-A	Lab Control Sample	73	70	53	69	38	73
LCSD 570-460222/3-A	Lab Control Sample Dup	81	71	51	62	37	80
MB 570-460222/1-A	Method Blank	70	61	53	68	37	80

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)

Surrogate Summary

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

Job ID: 380-103819-1
SDG: Quarterly

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

Matrix: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1 (38-134)
380-103819-1	AIEA GULCH WELLS PUMP 2	78

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)

Lab Sample ID	Client Sample ID	BFB1 (38-134)
380-103360-C-3 MS	Matrix Spike	95
380-103360-C-3 MSD	Matrix Spike Duplicate	100
380-103819-2	TRAVEL BLANK	78
LCS 570-460706/4	Lab Control Sample	99
LCSD 570-460706/5	Lab Control Sample Dup	101
MB 570-460706/6	Method Blank	97
MRL 570-460706/3	Lab Control Sample	94

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Matrix: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DBPP1 (60-140)
380-103819-1	AIEA GULCH WELLS PUMP 2	96

Surrogate Legend

DBPP = 1,2-Dibromopropane (Surr)

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DBPP1 (60-140)
380-103787-G-1-A MS	Matrix Spike	97
380-103819-2	TRAVEL BLANK	97
380-103895-P-1-A DU	Duplicate	97
380-104963-BU-1-A MS	Matrix Spike	92
380-104963-BV-1-A DU	Duplicate	95
LCS 380-100477/29-A	Lab Control Sample	95
LCS 380-99690/29-A	Lab Control Sample	92
MBL 380-100477/4-A	Method Blank	96
MBL 380-99690/4-A	Method Blank	97
MRL 380-100477/2-A	Lab Control Sample	94
MRL 380-100477/3-A	Lab Control Sample	93
MRL 380-99690/2-A	Lab Control Sample	94
MRL 380-99690/3-A	Lab Control Sample	99

Surrogate Summary

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

Job ID: 380-103819-1
SDG: Quarterly

Surrogate Legend

DBPP = 1,2-Dibromopropane (Surr)

Method: 505 - Organochlorine Pesticides/PCBs (GC)

Matrix: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX1 (70-130)
380-103819-1	AIEA GULCH WELLS PUMP 2	101

Surrogate Legend

TCX = Tetrachloro-m-xylene

Method: 505 - Organochlorine Pesticides/PCBs (GC)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX1 (70-130)
380-102321-AN-1-A MS	Matrix Spike	105
380-102321-AP-1-A MS	Matrix Spike	99
380-102326-AL-1-A MS	Matrix Spike	103
380-102326-AR-1-A MS	Matrix Spike	104
LCS 380-99012/31-A	Lab Control Sample	103
LCSD 380-99012/32-A	Lab Control Sample Dup	104
MB 380-99012/3-A	Method Blank	101
MRL 380-99012/1-A	Lab Control Sample	103
MRL 380-99012/2-A	Lab Control Sample	101

Surrogate Legend

TCX = Tetrachloro-m-xylene

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)
380-103819-1	AIEA GULCH WELLS PUMP 2	96

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 570-460900/2-A	Lab Control Sample	104
LCSD 570-460900/3-A	Lab Control Sample Dup	106
MB 570-460900/1-A	Method Blank	100
MRL 570-460900/4-A	Lab Control Sample	98

Surrogate Legend

OTCSN = n-Octacosane (Surr)

Surrogate Summary

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC)

Matrix: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HF2PP2 (54-120)
380-103819-1	AIEA GULCH WELLS PUMP 2	86

Surrogate Legend

HF2PP = Hexafluoro-2-propanol (Surr)

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HF2PP2 (54-120)
380-103361-AI-1 MS	Matrix Spike	98
380-103361-AI-1 MSD	Matrix Spike Duplicate	105
LCS 570-460498/4	Lab Control Sample	110
LCSD 570-460498/5	Lab Control Sample Dup	109
MB 570-460498/3	Method Blank	96

Surrogate Legend

HF2PP = Hexafluoro-2-propanol (Surr)

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HF2PP1 (54-120)
MRL 570-460498/6	Lab Control Sample	91

Surrogate Legend

HF2PP = Hexafluoro-2-propanol (Surr)

QC Sample Results

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

Job ID: 380-103819-1
 SDG: Quarterly

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 380-99494/8
Matrix: Water
Analysis Batch: 99494

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L			07/17/24 17:58	1
1,1,1-Trichloroethane	<0.50		0.50	ug/L			07/17/24 17:58	1
1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L			07/17/24 17:58	1
1,1,2-Trichloroethane	<0.50		0.50	ug/L			07/17/24 17:58	1
1,1-Dichloroethane	<0.50		0.50	ug/L			07/17/24 17:58	1
1,1-Dichlorethylene	<0.50		0.50	ug/L			07/17/24 17:58	1
1,1-Dichloropropene	<0.50		0.50	ug/L			07/17/24 17:58	1
1,2,3-Trichlorobenzene	<0.50		0.50	ug/L			07/17/24 17:58	1
1,2,3-Trichloropropane	<0.50		0.50	ug/L			07/17/24 17:58	1
1,2,4-Trichlorobenzene	<0.50		0.50	ug/L			07/17/24 17:58	1
1,2,4-Trimethylbenzene	<0.50		0.50	ug/L			07/17/24 17:58	1
1,2-Dichloroethane	<0.50		0.50	ug/L			07/17/24 17:58	1
1,2-Dichloropropane	<0.50		0.50	ug/L			07/17/24 17:58	1
1,3,5-Trimethylbenzene	<0.50		0.50	ug/L			07/17/24 17:58	1
1,3-Dichloropropane	<0.50		0.50	ug/L			07/17/24 17:58	1
2,2-Dichloropropane	<0.50		0.50	ug/L			07/17/24 17:58	1
2-Butanone (MEK)	<5.0		5.0	ug/L			07/17/24 17:58	1
4-Methyl-2-pentanone (MIBK)	<5.0		5.0	ug/L			07/17/24 17:58	1
Acetone	<500		500	ug/L			07/17/24 17:58	1
Benzene	<0.50		0.50	ug/L			07/17/24 17:58	1
Bromobenzene	<0.50		0.50	ug/L			07/17/24 17:58	1
Bromochloromethane	<0.50		0.50	ug/L			07/17/24 17:58	1
Bromodichloromethane	<0.50		0.50	ug/L			07/17/24 17:58	1
Bromoform	<0.50		0.50	ug/L			07/17/24 17:58	1
Bromomethane (Methyl Bromide)	<0.50		0.50	ug/L			07/17/24 17:58	1
Carbon disulfide	<0.50		0.50	ug/L			07/17/24 17:58	1
Carbon tetrachloride	<0.50		0.50	ug/L			07/17/24 17:58	1
Chlorobenzene	<0.50		0.50	ug/L			07/17/24 17:58	1
Chlorodibromomethane	<0.50		0.50	ug/L			07/17/24 17:58	1
Chloroethane	<0.50		0.50	ug/L			07/17/24 17:58	1
Chloroform (Trichloromethane)	<0.50		0.50	ug/L			07/17/24 17:58	1
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L			07/17/24 17:58	1
cis-1,3-Dichloropropene	<0.50		0.50	ug/L			07/17/24 17:58	1
Dibromomethane	<0.50		0.50	ug/L			07/17/24 17:58	1
Dichlorodifluoromethane	<0.50		0.50	ug/L			07/17/24 17:58	1
Dichloromethane	<0.50		0.50	ug/L			07/17/24 17:58	1
Ethylbenzene	<0.50		0.50	ug/L			07/17/24 17:58	1
Hexachlorobutadiene	<0.50		0.50	ug/L			07/17/24 17:58	1
Isopropylbenzene	<0.50		0.50	ug/L			07/17/24 17:58	1
m,p-Xylenes	<0.50		0.50	ug/L			07/17/24 17:58	1
m-Dichlorobenzene (1,3-DCB)	<0.50		0.50	ug/L			07/17/24 17:58	1
Methyl-tert-butyl Ether (MTBE)	<0.50		0.50	ug/L			07/17/24 17:58	1
Naphthalene	<0.50		0.50	ug/L			07/17/24 17:58	1
n-Butylbenzene	<0.50		0.50	ug/L			07/17/24 17:58	1
N-Propylbenzene	<0.50		0.50	ug/L			07/17/24 17:58	1
o-Chlorotoluene	<0.50		0.50	ug/L			07/17/24 17:58	1
o-Dichlorobenzene (1,2-DCB)	<0.50		0.50	ug/L			07/17/24 17:58	1
o-Xylene	<0.50		0.50	ug/L			07/17/24 17:58	1

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QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 380-99494/8
Matrix: Water
Analysis Batch: 99494

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
p-Chlorotoluene	<0.50		0.50	ug/L			07/17/24 17:58	1
p-Dichlorobenzene (1,4-DCB)	<0.50		0.50	ug/L			07/17/24 17:58	1
p-Isopropyltoluene	<0.50		0.50	ug/L			07/17/24 17:58	1
sec-Butylbenzene	<0.50		0.50	ug/L			07/17/24 17:58	1
Styrene	<0.50		0.50	ug/L			07/17/24 17:58	1
Tert-amyl methyl ether	<3.0		3.0	ug/L			07/17/24 17:58	1
1,3-Dichloropropene, Total	<0.50		0.50	ug/L			07/17/24 17:58	1
Tert-butyl ethyl ether	<3.0		3.0	ug/L			07/17/24 17:58	1
tert-Butylbenzene	<0.50		0.50	ug/L			07/17/24 17:58	1
Tetrachloroethene (PCE)	<0.50		0.50	ug/L			07/17/24 17:58	1
Toluene	<0.50		0.50	ug/L			07/17/24 17:58	1
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L			07/17/24 17:58	1
trans-1,3-Dichloropropene	<0.50		0.50	ug/L			07/17/24 17:58	1
Trichloroethylene (TCE)	<0.50		0.50	ug/L			07/17/24 17:58	1
Bromoethane	<0.50		0.50	ug/L			07/17/24 17:58	1
Trichlorofluoromethane (Freon 11)	<0.50		0.50	ug/L			07/17/24 17:58	1
Chloromethane (methyl chloride)	<0.50		0.50	ug/L			07/17/24 17:58	1
Trichlorotrifluoroethane	<0.50		0.50	ug/L			07/17/24 17:58	1
Diisopropyl ether	<3.0		3.0	ug/L			07/17/24 17:58	1
Vinyl Chloride (VC)	<0.30		0.30	ug/L			07/17/24 17:58	1
Xylenes, Total	<0.50		0.50	ug/L			07/17/24 17:58	1

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		07/17/24 17:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		70 - 130		07/17/24 17:58	1
4-Bromofluorobenzene (Surr)	97		70 - 130		07/17/24 17:58	1
Toluene-d8 (Surr)	99		70 - 130		07/17/24 17:58	1

Lab Sample ID: LCS 380-99494/5
Matrix: Water
Analysis Batch: 99494

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	5.00	5.42		ug/L		108	70 - 130
1,1,1-Trichloroethane	5.00	5.14		ug/L		103	70 - 130
1,1,2,2-Tetrachloroethane	5.00	5.51		ug/L		110	70 - 130
1,1,2-Trichloroethane	5.00	5.19		ug/L		104	70 - 130
1,1-Dichloroethane	5.00	5.42		ug/L		108	70 - 130
1,1-Dichlorethylene	5.00	5.53		ug/L		111	70 - 130
1,1-Dichloropropene	5.00	5.11		ug/L		102	70 - 130
1,2,3-Trichlorobenzene	5.00	5.61		ug/L		112	70 - 130
1,2,3-Trichloropropane	5.00	5.64		ug/L		113	70 - 130
1,2,4-Trichlorobenzene	5.00	5.68		ug/L		114	70 - 130
1,2,4-Trimethylbenzene	5.00	5.91		ug/L		118	70 - 130
1,2-Dichloroethane	5.00	5.62		ug/L		112	70 - 130
1,2-Dichloropropane	5.00	5.21		ug/L		104	70 - 130

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QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 380-99494/5
Matrix: Water
Analysis Batch: 99494

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3,5-Trimethylbenzene	5.00	5.87		ug/L		117	70 - 130
1,3-Dichloropropane	5.00	5.82		ug/L		116	70 - 130
2,2-Dichloropropane	5.00	5.21		ug/L		104	70 - 130
2-Butanone (MEK)	50.0	52.6		ug/L		105	70 - 130
4-Methyl-2-pentanone (MIBK)	50.0	53.0		ug/L		106	70 - 130
Acetone	50.0	54.1	J	ug/L		108	70 - 130
Benzene	5.00	5.69		ug/L		114	70 - 130
Bromobenzene	5.00	5.45		ug/L		109	70 - 130
Bromochloromethane	5.00	5.44		ug/L		109	70 - 130
Bromodichloromethane	5.00	5.10		ug/L		102	70 - 130
Bromoform	5.00	5.57		ug/L		111	70 - 130
Bromomethane (Methyl Bromide)	5.00	5.57		ug/L		111	70 - 130
Carbon disulfide	5.00	5.20		ug/L		104	70 - 130
Carbon tetrachloride	5.00	4.92		ug/L		98	70 - 130
Chlorobenzene	5.00	5.81		ug/L		116	70 - 130
Chlorodibromomethane	5.00	4.82		ug/L		96	70 - 130
cis-1,3-Dichloropropene	5.00	5.57		ug/L		111	70 - 130
Dichloromethane	5.00	5.61		ug/L		112	70 - 130
Ethylbenzene	5.00	5.77		ug/L		115	70 - 130
Hexachlorobutadiene	5.00	4.70		ug/L		94	70 - 130
Isopropylbenzene	5.00	5.82		ug/L		116	70 - 130
m,p-Xylenes	10.0	11.3		ug/L		113	70 - 130
m-Dichlorobenzene (1,3-DCB)	5.00	5.64		ug/L		113	70 - 130
Methyl-tert-butyl Ether (MTBE)	5.00	5.72		ug/L		114	70 - 130
Naphthalene	5.00	5.66		ug/L		113	70 - 130
n-Butylbenzene	5.00	6.14		ug/L		123	70 - 130
N-Propylbenzene	5.00	5.73		ug/L		115	70 - 130
o-Chlorotoluene	5.00	5.86		ug/L		117	70 - 130
o-Dichlorobenzene (1,2-DCB)	5.00	5.94		ug/L		119	70 - 130
o-Xylene	5.00	5.83		ug/L		117	70 - 130
p-Chlorotoluene	5.00	5.52		ug/L		110	70 - 130
p-Dichlorobenzene (1,4-DCB)	5.00	5.64		ug/L		113	70 - 130
p-Isopropyltoluene	5.00	5.82		ug/L		116	70 - 130
sec-Butylbenzene	5.00	5.78		ug/L		116	70 - 130
Styrene	5.00	5.99		ug/L		120	70 - 130
Tert-amyl methyl ether	5.00	5.46		ug/L		109	70 - 130
1,3-Dichloropropene, Total	10.0	10.4		ug/L		104	70 - 130
Tert-butyl ethyl ether	5.00	5.65		ug/L		113	70 - 130
tert-Butylbenzene	5.00	5.57		ug/L		111	70 - 130
Tetrachloroethene (PCE)	5.00	5.42		ug/L		108	70 - 130
Toluene	5.00	5.86		ug/L		117	70 - 130
trans-1,2-Dichloroethylene	5.00	5.56		ug/L		111	70 - 130
trans-1,3-Dichloropropene	5.00	4.79		ug/L		96	70 - 130
Trichloroethylene (TCE)	5.00	5.32		ug/L		106	70 - 130
Bromoethane	5.00	5.35		ug/L		107	70 - 130
Trichlorofluoromethane (Freon 11)	5.00	5.19		ug/L		104	70 - 130
Trichlorotrifluoroethane	5.00	5.27		ug/L		105	70 - 130
Diisopropyl ether	5.00	5.88		ug/L		118	70 - 130

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 380-99494/5
Matrix: Water
Analysis Batch: 99494

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Vinyl Chloride (VC)	5.00	5.27		ug/L		105	70 - 130
Xylenes, Total	15.0	17.1		ug/L		114	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		70 - 130
4-Bromofluorobenzene (Surr)	98		70 - 130
Toluene-d8 (Surr)	103		70 - 130

Lab Sample ID: LCSD 380-99494/6
Matrix: Water
Analysis Batch: 99494

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
1,1,1,2-Tetrachloroethane	5.00	5.66		ug/L		113	70 - 130	4	20
1,1,1-Trichloroethane	5.00	5.40		ug/L		108	70 - 130	5	20
1,1,2,2-Tetrachloroethane	5.00	5.42		ug/L		108	70 - 130	2	20
1,1,2-Trichloroethane	5.00	5.52		ug/L		110	70 - 130	6	20
1,1-Dichloroethane	5.00	5.44		ug/L		109	70 - 130	0	20
1,1-Dichlorethylene	5.00	5.42		ug/L		108	70 - 130	2	20
1,1-Dichloropropene	5.00	5.38		ug/L		108	70 - 130	5	20
1,2,3-Trichlorobenzene	5.00	5.54		ug/L		111	70 - 130	1	20
1,2,3-Trichloropropane	5.00	5.69		ug/L		114	70 - 130	1	20
1,2,4-Trichlorobenzene	5.00	5.69		ug/L		114	70 - 130	0	20
1,2,4-Trimethylbenzene	5.00	5.94		ug/L		119	70 - 130	1	20
1,2-Dichloroethane	5.00	5.47		ug/L		109	70 - 130	3	20
1,2-Dichloropropane	5.00	5.31		ug/L		106	70 - 130	2	20
1,3,5-Trimethylbenzene	5.00	5.93		ug/L		119	70 - 130	1	20
1,3-Dichloropropane	5.00	5.86		ug/L		117	70 - 130	1	20
2,2-Dichloropropane	5.00	5.18		ug/L		104	70 - 130	1	20
2-Butanone (MEK)	50.0	49.9		ug/L		100	70 - 130	5	20
4-Methyl-2-pentanone (MIBK)	50.0	64.6		ug/L		129	70 - 130	20	20
Acetone	50.0	55.2	J	ug/L		110	70 - 130	2	20
Benzene	5.00	5.69		ug/L		114	70 - 130	0	20
Bromobenzene	5.00	5.43		ug/L		109	70 - 130	0	20
Bromochloromethane	5.00	5.61		ug/L		112	70 - 130	3	20
Bromodichloromethane	5.00	5.20		ug/L		104	70 - 130	2	20
Bromoform	5.00	5.63		ug/L		113	70 - 130	1	20
Bromomethane (Methyl Bromide)	5.00	5.71		ug/L		114	70 - 130	2	20
Carbon disulfide	5.00	5.46		ug/L		109	70 - 130	5	20
Carbon tetrachloride	5.00	5.07		ug/L		101	70 - 130	3	20
Chlorobenzene	5.00	5.87		ug/L		117	70 - 130	1	20
Chlorodibromomethane	5.00	5.19		ug/L		104	70 - 130	7	20
cis-1,3-Dichloropropene	5.00	5.24		ug/L		105	70 - 130	6	20
Dichloromethane	5.00	5.72		ug/L		114	70 - 130	2	20
Ethylbenzene	5.00	5.94		ug/L		119	70 - 130	3	20
Hexachlorobutadiene	5.00	4.85		ug/L		97	70 - 130	3	20
Isopropylbenzene	5.00	5.72		ug/L		114	70 - 130	2	20
m,p-Xylenes	10.0	11.4		ug/L		114	70 - 130	1	20

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 380-99494/6
Matrix: Water
Analysis Batch: 99494

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
m-Dichlorobenzene (1,3-DCB)	5.00	5.65		ug/L		113	70 - 130	0	20
Methyl-tert-butyl Ether (MTBE)	5.00	5.65		ug/L		113	70 - 130	1	20
Naphthalene	5.00	5.68		ug/L		114	70 - 130	0	20
n-Butylbenzene	5.00	5.77		ug/L		115	70 - 130	6	20
N-Propylbenzene	5.00	5.89		ug/L		118	70 - 130	3	20
o-Chlorotoluene	5.00	5.90		ug/L		118	70 - 130	1	20
o-Dichlorobenzene (1,2-DCB)	5.00	5.58		ug/L		112	70 - 130	6	20
o-Xylene	5.00	5.98		ug/L		120	70 - 130	3	20
p-Chlorotoluene	5.00	5.89		ug/L		118	70 - 130	6	20
p-Dichlorobenzene (1,4-DCB)	5.00	5.36		ug/L		107	70 - 130	5	20
p-Isopropyltoluene	5.00	5.81		ug/L		116	70 - 130	0	20
sec-Butylbenzene	5.00	5.76		ug/L		115	70 - 130	0	20
Styrene	5.00	5.91		ug/L		118	70 - 130	1	20
Tert-amyl methyl ether	5.00	5.50		ug/L		110	70 - 130	1	20
1,3-Dichloropropene, Total	10.0	10.7		ug/L		107	70 - 130	3	20
Tert-butyl ethyl ether	5.00	5.49		ug/L		110	70 - 130	3	20
tert-Butylbenzene	5.00	5.75		ug/L		115	70 - 130	3	20
Tetrachloroethene (PCE)	5.00	5.49		ug/L		110	70 - 130	1	20
Toluene	5.00	6.38		ug/L		128	70 - 130	9	20
trans-1,2-Dichloroethylene	5.00	5.82		ug/L		116	70 - 130	5	20
trans-1,3-Dichloropropene	5.00	5.42		ug/L		108	70 - 130	12	20
Trichloroethylene (TCE)	5.00	5.57		ug/L		111	70 - 130	5	20
Bromoethane	5.00	5.54		ug/L		111	70 - 130	3	20
Trichlorofluoromethane (Freon 11)	5.00	5.07		ug/L		101	70 - 130	2	20
Trichlorotrifluoroethane	5.00	5.07		ug/L		101	70 - 130	4	20
Diisopropyl ether	5.00	5.82		ug/L		116	70 - 130	1	20
Vinyl Chloride (VC)	5.00	5.56		ug/L		111	70 - 130	5	20
Xylenes, Total	15.0	17.4		ug/L		116	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene (Surr)	100		70 - 130
Toluene-d8 (Surr)	113		70 - 130

Lab Sample ID: MRL 380-99494/3
Matrix: Water
Analysis Batch: 99494

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
m,p-Xylenes	0.500	0.429	J	ug/L		86	50 - 150
Vinyl Chloride (VC)	0.250	0.214	J	ug/L		86	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	MRL Limits
1,2-Dichloroethane-d4 (Surr)	96		70 - 130
4-Bromofluorobenzene (Surr)	99		70 - 130
Toluene-d8 (Surr)	93		70 - 130

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MRL 380-99494/4
Matrix: Water
Analysis Batch: 99494

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	0.500	0.454	J	ug/L		91	50 - 150
1,1,1-Trichloroethane	0.500	0.458	J	ug/L		92	50 - 150
1,1,2,2-Tetrachloroethane	0.500	0.479	J	ug/L		96	50 - 150
1,1,2-Trichloroethane	0.500	0.505		ug/L		101	50 - 150
1,1-Dichloroethane	0.500	0.434	J	ug/L		87	50 - 150
1,1-Dichlorethylene	0.500	0.441	J	ug/L		88	50 - 150
1,1-Dichloropropene	0.500	0.465	J	ug/L		93	50 - 150
1,2,3-Trichlorobenzene	0.500	0.594		ug/L		119	50 - 150
1,2,3-Trichloropropane	0.500	0.531		ug/L		106	50 - 150
1,2,4-Trichlorobenzene	0.500	0.508		ug/L		102	50 - 150
1,2,4-Trimethylbenzene	0.500	0.472	J	ug/L		94	50 - 150
1,2-Dichloroethane	0.500	0.500		ug/L		100	50 - 150
1,2-Dichloropropane	0.500	0.509		ug/L		102	50 - 150
1,3,5-Trimethylbenzene	0.500	0.498	J	ug/L		100	50 - 150
1,3-Dichloropropane	0.500	0.469	J	ug/L		94	50 - 150
2,2-Dichloropropane	0.500	0.439	J	ug/L		88	50 - 150
2-Butanone (MEK)	5.00	4.86	J	ug/L		97	50 - 150
4-Methyl-2-pentanone (MIBK)	5.00	4.52	J	ug/L		90	50 - 150
Acetone	5.00	4.09	J	ug/L		82	50 - 150
Benzene	0.500	0.514		ug/L		103	50 - 150
Bromobenzene	0.500	0.479	J	ug/L		96	50 - 150
Bromochloromethane	0.500	0.494	J	ug/L		99	50 - 150
Bromodichloromethane	0.500	0.460	J	ug/L		92	50 - 150
Bromoform	0.500	0.529		ug/L		106	50 - 150
Bromomethane (Methyl Bromide)	0.500	0.546		ug/L		109	50 - 150
Carbon disulfide	0.500	0.411	J	ug/L		82	50 - 150
Carbon tetrachloride	0.500	0.414	J	ug/L		83	50 - 150
Chlorobenzene	0.500	0.481	J	ug/L		96	50 - 150
Chlorodibromomethane	0.500	0.388	J	ug/L		78	50 - 150
cis-1,3-Dichloropropene	0.500	0.434	J	ug/L		87	50 - 150
Dichloromethane	0.500	0.525		ug/L		105	50 - 150
Ethylbenzene	0.500	0.503		ug/L		101	50 - 150
Hexachlorobutadiene	0.500	0.398	J	ug/L		80	50 - 150
Isopropylbenzene	0.500	0.497	J	ug/L		99	50 - 150
m,p-Xylenes	1.00	1.01		ug/L		101	50 - 150
m-Dichlorobenzene (1,3-DCB)	0.500	0.493	J	ug/L		99	50 - 150
Methyl-tert-butyl Ether (MTBE)	0.500	0.464	J	ug/L		93	50 - 150
Naphthalene	0.500	0.528		ug/L		106	50 - 150
n-Butylbenzene	0.500	0.498	J	ug/L		100	50 - 150
N-Propylbenzene	0.500	0.501		ug/L		100	50 - 150
o-Chlorotoluene	0.500	0.534		ug/L		107	50 - 150
o-Dichlorobenzene (1,2-DCB)	0.500	0.491	J	ug/L		98	50 - 150
o-Xylene	0.500	0.510		ug/L		102	50 - 150
p-Chlorotoluene	0.500	0.509		ug/L		102	50 - 150
p-Dichlorobenzene (1,4-DCB)	0.500	0.519		ug/L		104	50 - 150
p-Isopropyltoluene	0.500	0.489	J	ug/L		98	50 - 150
sec-Butylbenzene	0.500	0.470	J	ug/L		94	50 - 150
Styrene	0.500	0.515		ug/L		103	50 - 150

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MRL 380-99494/4
Matrix: Water
Analysis Batch: 99494

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Tert-amyl methyl ether	0.500	0.475	J	ug/L		95	50 - 150
1,3-Dichloropropene, Total	1.00	0.818		ug/L		82	50 - 150
Tert-butyl ethyl ether	0.500	0.467	J	ug/L		93	50 - 150
tert-Butylbenzene	0.500	0.495	J	ug/L		99	50 - 150
Tetrachloroethene (PCE)	0.500	0.410	J	ug/L		82	50 - 150
Toluene	0.500	0.502		ug/L		100	50 - 150
trans-1,2-Dichloroethylene	0.500	0.462	J	ug/L		92	50 - 150
trans-1,3-Dichloropropene	0.500	0.384	J	ug/L		77	50 - 150
Trichloroethylene (TCE)	0.500	0.432	J	ug/L		86	50 - 150
Bromoethane	0.500	0.594		ug/L		119	50 - 150
Trichlorofluoromethane (Freon 11)	0.500	0.360	J	ug/L		72	50 - 150
Trichlorotrifluoroethane	0.500	0.348	J	ug/L		70	50 - 150
Diisopropyl ether	0.500	0.491	J	ug/L		98	50 - 150
Vinyl Chloride (VC)	0.500	0.417		ug/L		83	50 - 150
Xylenes, Total	1.50	1.51		ug/L		101	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
4-Bromofluorobenzene (Surr)	99		70 - 130
Toluene-d8 (Surr)	95		70 - 130

Lab Sample ID: MB 380-99547/5
Matrix: Water
Analysis Batch: 99547

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L			07/18/24 05:17	1
1,1,1-Trichloroethane	<0.50		0.50	ug/L			07/18/24 05:17	1
1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L			07/18/24 05:17	1
1,1,2-Trichloroethane	<0.50		0.50	ug/L			07/18/24 05:17	1
1,1-Dichloroethane	<0.50		0.50	ug/L			07/18/24 05:17	1
1,1-Dichloroethylene	<0.50		0.50	ug/L			07/18/24 05:17	1
1,1-Dichloropropene	<0.50		0.50	ug/L			07/18/24 05:17	1
1,2,3-Trichlorobenzene	<0.50		0.50	ug/L			07/18/24 05:17	1
1,2,3-Trichloropropane	<0.50		0.50	ug/L			07/18/24 05:17	1
1,2,4-Trichlorobenzene	<0.50		0.50	ug/L			07/18/24 05:17	1
1,2,4-Trimethylbenzene	<0.50		0.50	ug/L			07/18/24 05:17	1
1,2-Dichloroethane	<0.50		0.50	ug/L			07/18/24 05:17	1
1,2-Dichloropropane	<0.50		0.50	ug/L			07/18/24 05:17	1
1,3,5-Trimethylbenzene	<0.50		0.50	ug/L			07/18/24 05:17	1
1,3-Dichloropropane	<0.50		0.50	ug/L			07/18/24 05:17	1
2,2-Dichloropropane	<0.50		0.50	ug/L			07/18/24 05:17	1
2-Butanone (MEK)	<5.0		5.0	ug/L			07/18/24 05:17	1
4-Methyl-2-pentanone (MIBK)	<5.0		5.0	ug/L			07/18/24 05:17	1
Acetone	<500		500	ug/L			07/18/24 05:17	1
Benzene	<0.50		0.50	ug/L			07/18/24 05:17	1
Bromobenzene	<0.50		0.50	ug/L			07/18/24 05:17	1
Bromochloromethane	<0.50		0.50	ug/L			07/18/24 05:17	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-103819-1
 SDG: Quarterly

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 380-99547/5
Matrix: Water
Analysis Batch: 99547

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Bromodichloromethane	<0.50		0.50	ug/L			07/18/24 05:17	1
Bromoform	<0.50		0.50	ug/L			07/18/24 05:17	1
Bromomethane (Methyl Bromide)	<0.50		0.50	ug/L			07/18/24 05:17	1
Carbon disulfide	<0.50		0.50	ug/L			07/18/24 05:17	1
Carbon tetrachloride	<0.50		0.50	ug/L			07/18/24 05:17	1
Chlorobenzene	<0.50		0.50	ug/L			07/18/24 05:17	1
Chlorodibromomethane	<0.50		0.50	ug/L			07/18/24 05:17	1
Chloroethane	<0.50		0.50	ug/L			07/18/24 05:17	1
Chloroform (Trichloromethane)	<0.50		0.50	ug/L			07/18/24 05:17	1
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L			07/18/24 05:17	1
cis-1,3-Dichloropropene	<0.50		0.50	ug/L			07/18/24 05:17	1
Dibromomethane	<0.50		0.50	ug/L			07/18/24 05:17	1
Dichlorodifluoromethane	<0.50		0.50	ug/L			07/18/24 05:17	1
Dichloromethane	<0.50		0.50	ug/L			07/18/24 05:17	1
Ethylbenzene	<0.50		0.50	ug/L			07/18/24 05:17	1
Hexachlorobutadiene	<0.50		0.50	ug/L			07/18/24 05:17	1
Isopropylbenzene	<0.50		0.50	ug/L			07/18/24 05:17	1
m,p-Xylenes	<0.50		0.50	ug/L			07/18/24 05:17	1
m-Dichlorobenzene (1,3-DCB)	<0.50		0.50	ug/L			07/18/24 05:17	1
Methyl-tert-butyl Ether (MTBE)	<0.50		0.50	ug/L			07/18/24 05:17	1
Naphthalene	<0.50		0.50	ug/L			07/18/24 05:17	1
n-Butylbenzene	<0.50		0.50	ug/L			07/18/24 05:17	1
N-Propylbenzene	<0.50		0.50	ug/L			07/18/24 05:17	1
o-Chlorotoluene	<0.50		0.50	ug/L			07/18/24 05:17	1
o-Dichlorobenzene (1,2-DCB)	<0.50		0.50	ug/L			07/18/24 05:17	1
o-Xylene	<0.50		0.50	ug/L			07/18/24 05:17	1
p-Chlorotoluene	<0.50		0.50	ug/L			07/18/24 05:17	1
p-Dichlorobenzene (1,4-DCB)	<0.50		0.50	ug/L			07/18/24 05:17	1
p-Isopropyltoluene	<0.50		0.50	ug/L			07/18/24 05:17	1
sec-Butylbenzene	<0.50		0.50	ug/L			07/18/24 05:17	1
Styrene	<0.50		0.50	ug/L			07/18/24 05:17	1
Tert-amyl methyl ether	<3.0		3.0	ug/L			07/18/24 05:17	1
1,3-Dichloropropene, Total	<0.50		0.50	ug/L			07/18/24 05:17	1
Tert-butyl ethyl ether	<3.0		3.0	ug/L			07/18/24 05:17	1
tert-Butylbenzene	<0.50		0.50	ug/L			07/18/24 05:17	1
Tetrachloroethene (PCE)	<0.50		0.50	ug/L			07/18/24 05:17	1
Toluene	<0.50		0.50	ug/L			07/18/24 05:17	1
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L			07/18/24 05:17	1
trans-1,3-Dichloropropene	<0.50		0.50	ug/L			07/18/24 05:17	1
Trichloroethylene (TCE)	<0.50		0.50	ug/L			07/18/24 05:17	1
Bromoethane	<0.50		0.50	ug/L			07/18/24 05:17	1
Trichlorofluoromethane (Freon 11)	<0.50		0.50	ug/L			07/18/24 05:17	1
Chloromethane (methyl chloride)	<0.50		0.50	ug/L			07/18/24 05:17	1
Trichlorotrifluoroethane	<0.50		0.50	ug/L			07/18/24 05:17	1
Diisopropyl ether	<3.0		3.0	ug/L			07/18/24 05:17	1
Vinyl Chloride (VC)	<0.30		0.30	ug/L			07/18/24 05:17	1
Xylenes, Total	<0.50		0.50	ug/L			07/18/24 05:17	1

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 380-99547/5
Matrix: Water
Analysis Batch: 99547

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

<i>Tentatively Identified Compound</i>	<i>Est. Result</i>	<i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>RT</i>	<i>CAS No.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Tentatively Identified Compound</i>	None		ug/L			N/A		07/18/24 05:17	1

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	90		70 - 130		07/18/24 05:17	1
4-Bromofluorobenzene (Surr)	99		70 - 130		07/18/24 05:17	1
Toluene-d8 (Surr)	93		70 - 130		07/18/24 05:17	1

Lab Sample ID: LCS 380-99547/3
Matrix: Water
Analysis Batch: 99547

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

<i>Analyte</i>	<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
1,1,1,2-Tetrachloroethane	5.00	4.73		ug/L		95	70 - 130
1,1,1-Trichloroethane	5.00	4.64		ug/L		93	70 - 130
1,1,2,2-Tetrachloroethane	5.00	4.92		ug/L		98	70 - 130
1,1,2-Trichloroethane	5.00	4.70		ug/L		94	70 - 130
1,1-Dichloroethane	5.00	4.70		ug/L		94	70 - 130
1,1-Dichlorethylene	5.00	4.87		ug/L		97	70 - 130
1,1-Dichloropropene	5.00	4.92		ug/L		98	70 - 130
1,2,3-Trichlorobenzene	5.00	5.32		ug/L		106	70 - 130
1,2,3-Trichloropropane	5.00	4.99		ug/L		100	70 - 130
1,2,4-Trichlorobenzene	5.00	5.39		ug/L		108	70 - 130
1,2,4-Trimethylbenzene	5.00	5.33		ug/L		107	70 - 130
1,2-Dichloroethane	5.00	4.94		ug/L		99	70 - 130
1,2-Dichloropropane	5.00	5.22		ug/L		104	70 - 130
1,3,5-Trimethylbenzene	5.00	5.39		ug/L		108	70 - 130
1,3-Dichloropropane	5.00	5.04		ug/L		101	70 - 130
2,2-Dichloropropane	5.00	3.69		ug/L		74	70 - 130
2-Butanone (MEK)	50.0	45.0		ug/L		90	70 - 130
4-Methyl-2-pentanone (MIBK)	50.0	46.3		ug/L		93	70 - 130
Acetone	50.0	45.2	J	ug/L		90	70 - 130
Benzene	5.00	5.36		ug/L		107	70 - 130
Bromobenzene	5.00	5.11		ug/L		102	70 - 130
Bromochloromethane	5.00	4.63		ug/L		93	70 - 130
Bromodichloromethane	5.00	4.59		ug/L		92	70 - 130
Bromoform	5.00	5.15		ug/L		103	70 - 130
Bromomethane (Methyl Bromide)	5.00	4.73		ug/L		95	70 - 130
Carbon disulfide	5.00	4.99		ug/L		100	70 - 130
Carbon tetrachloride	5.00	4.67		ug/L		93	70 - 130
Chlorobenzene	5.00	5.05		ug/L		101	70 - 130
Chlorodibromomethane	5.00	4.29		ug/L		86	70 - 130
cis-1,3-Dichloropropene	5.00	4.73		ug/L		95	70 - 130
Dichloromethane	5.00	4.98		ug/L		100	70 - 130
Ethylbenzene	5.00	5.07		ug/L		101	70 - 130
Hexachlorobutadiene	5.00	4.13		ug/L		83	70 - 130
Isopropylbenzene	5.00	5.42		ug/L		108	70 - 130
m,p-Xylenes	10.0	10.1		ug/L		101	70 - 130
m-Dichlorobenzene (1,3-DCB)	5.00	5.28		ug/L		106	70 - 130

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QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 380-99547/3
Matrix: Water
Analysis Batch: 99547

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl-tert-butyl Ether (MTBE)	5.00	4.90		ug/L		98	70 - 130
Naphthalene	5.00	5.49		ug/L		110	70 - 130
n-Butylbenzene	5.00	5.50		ug/L		110	70 - 130
N-Propylbenzene	5.00	5.05		ug/L		101	70 - 130
o-Chlorotoluene	5.00	5.47		ug/L		109	70 - 130
o-Dichlorobenzene (1,2-DCB)	5.00	5.27		ug/L		105	70 - 130
o-Xylene	5.00	5.20		ug/L		104	70 - 130
p-Chlorotoluene	5.00	5.03		ug/L		101	70 - 130
p-Dichlorobenzene (1,4-DCB)	5.00	5.39		ug/L		108	70 - 130
p-Isopropyltoluene	5.00	5.31		ug/L		106	70 - 130
sec-Butylbenzene	5.00	5.43		ug/L		109	70 - 130
Styrene	5.00	5.18		ug/L		104	70 - 130
Tert-amyl methyl ether	5.00	4.93		ug/L		99	70 - 130
1,3-Dichloropropene, Total	10.0	9.03		ug/L		90	70 - 130
Tert-butyl ethyl ether	5.00	5.05		ug/L		101	70 - 130
tert-Butylbenzene	5.00	5.27		ug/L		105	70 - 130
Tetrachloroethene (PCE)	5.00	4.74		ug/L		95	70 - 130
Toluene	5.00	5.08		ug/L		102	70 - 130
trans-1,2-Dichloroethylene	5.00	4.94		ug/L		99	70 - 130
trans-1,3-Dichloropropene	5.00	4.30		ug/L		86	70 - 130
Trichloroethylene (TCE)	5.00	4.94		ug/L		99	70 - 130
Bromoethane	5.00	4.75		ug/L		95	70 - 130
Trichlorofluoromethane (Freon 11)	5.00	4.55		ug/L		91	70 - 130
Trichlorotrifluoroethane	5.00	4.49		ug/L		90	70 - 130
Diisopropyl ether	5.00	5.07		ug/L		101	70 - 130
Vinyl Chloride (VC)	5.00	4.69		ug/L		94	70 - 130
Xylenes, Total	15.0	15.3		ug/L		102	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		70 - 130
4-Bromofluorobenzene (Surr)	98		70 - 130
Toluene-d8 (Surr)	98		70 - 130

Lab Sample ID: LCSD 380-99547/4
Matrix: Water
Analysis Batch: 99547

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
1,1,1,2-Tetrachloroethane	5.00	5.31		ug/L		106	70 - 130	11	20
1,1,1-Trichloroethane	5.00	5.18		ug/L		104	70 - 130	11	20
1,1,1,2,2-Tetrachloroethane	5.00	4.90		ug/L		98	70 - 130	1	20
1,1,2-Trichloroethane	5.00	5.16		ug/L		103	70 - 130	9	20
1,1-Dichloroethane	5.00	5.28		ug/L		106	70 - 130	12	20
1,1-Dichlorethylene	5.00	5.43		ug/L		109	70 - 130	11	20
1,1-Dichloropropene	5.00	5.33		ug/L		107	70 - 130	8	20
1,2,3-Trichlorobenzene	5.00	4.93		ug/L		99	70 - 130	8	20
1,2,3-Trichloropropane	5.00	5.09		ug/L		102	70 - 130	2	20
1,2,4-Trichlorobenzene	5.00	5.20		ug/L		104	70 - 130	4	20

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QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 380-99547/4
Matrix: Water
Analysis Batch: 99547

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
1,2,4-Trimethylbenzene	5.00	5.12		ug/L		102	70 - 130	4	20
1,2-Dichloroethane	5.00	5.55		ug/L		111	70 - 130	12	20
1,2-Dichloropropane	5.00	5.13		ug/L		103	70 - 130	2	20
1,3,5-Trimethylbenzene	5.00	5.29		ug/L		106	70 - 130	2	20
1,3-Dichloropropane	5.00	5.44		ug/L		109	70 - 130	8	20
2,2-Dichloropropane	5.00	3.86		ug/L		77	70 - 130	4	20
2-Butanone (MEK)	50.0	51.3		ug/L		103	70 - 130	13	20
4-Methyl-2-pentanone (MIBK)	50.0	49.4		ug/L		99	70 - 130	6	20
Acetone	50.0	51.0	J	ug/L		102	70 - 130	12	20
Benzene	5.00	5.90		ug/L		118	70 - 130	10	20
Bromobenzene	5.00	4.86		ug/L		97	70 - 130	5	20
Bromochloromethane	5.00	5.44		ug/L		109	70 - 130	16	20
Bromodichloromethane	5.00	5.27		ug/L		105	70 - 130	14	20
Bromoform	5.00	4.73		ug/L		95	70 - 130	8	20
Bromomethane (Methyl Bromide)	5.00	5.19		ug/L		104	70 - 130	9	20
Carbon disulfide	5.00	5.17		ug/L		103	70 - 130	4	20
Carbon tetrachloride	5.00	5.17		ug/L		103	70 - 130	10	20
Chlorobenzene	5.00	5.68		ug/L		114	70 - 130	12	20
Chlorodibromomethane	5.00	4.73		ug/L		95	70 - 130	10	20
cis-1,3-Dichloropropene	5.00	5.11		ug/L		102	70 - 130	8	20
Dichloromethane	5.00	5.65		ug/L		113	70 - 130	13	20
Ethylbenzene	5.00	5.60		ug/L		112	70 - 130	10	20
Hexachlorobutadiene	5.00	4.59		ug/L		92	70 - 130	10	20
Isopropylbenzene	5.00	5.17		ug/L		103	70 - 130	5	20
m,p-Xylenes	10.0	10.9		ug/L		109	70 - 130	8	20
m-Dichlorobenzene (1,3-DCB)	5.00	5.08		ug/L		102	70 - 130	4	20
Methyl-tert-butyl Ether (MTBE)	5.00	5.27		ug/L		105	70 - 130	7	20
Naphthalene	5.00	5.18		ug/L		104	70 - 130	6	20
n-Butylbenzene	5.00	5.26		ug/L		105	70 - 130	4	20
N-Propylbenzene	5.00	5.64		ug/L		113	70 - 130	11	20
o-Chlorotoluene	5.00	5.33		ug/L		107	70 - 130	3	20
o-Dichlorobenzene (1,2-DCB)	5.00	5.11		ug/L		102	70 - 130	3	20
o-Xylene	5.00	5.67		ug/L		113	70 - 130	9	20
p-Chlorotoluene	5.00	5.56		ug/L		111	70 - 130	10	20
p-Dichlorobenzene (1,4-DCB)	5.00	5.16		ug/L		103	70 - 130	4	20
p-Isopropyltoluene	5.00	5.11		ug/L		102	70 - 130	4	20
sec-Butylbenzene	5.00	5.16		ug/L		103	70 - 130	5	20
Styrene	5.00	5.69		ug/L		114	70 - 130	9	20
Tert-amyl methyl ether	5.00	4.84		ug/L		97	70 - 130	2	20
1,3-Dichloropropene, Total	10.0	9.35		ug/L		94	70 - 130	3	20
Tert-butyl ethyl ether	5.00	5.52		ug/L		110	70 - 130	9	20
tert-Butylbenzene	5.00	4.99		ug/L		100	70 - 130	6	20
Tetrachloroethene (PCE)	5.00	5.20		ug/L		104	70 - 130	9	20
Toluene	5.00	5.32		ug/L		106	70 - 130	5	20
trans-1,2-Dichloroethylene	5.00	5.17		ug/L		103	70 - 130	4	20
trans-1,3-Dichloropropene	5.00	4.24		ug/L		85	70 - 130	1	20
Trichloroethylene (TCE)	5.00	5.07		ug/L		101	70 - 130	3	20
Bromoethane	5.00	4.93		ug/L		99	70 - 130	4	20

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 380-99547/4
Matrix: Water
Analysis Batch: 99547

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
Trichlorofluoromethane (Freon 11)	5.00	5.02		ug/L		100	70 - 130	10	20
Trichlorotrifluoroethane	5.00	5.06		ug/L		101	70 - 130	12	20
Diisopropyl ether	5.00	5.75		ug/L		115	70 - 130	12	20
Vinyl Chloride (VC)	5.00	5.24		ug/L		105	70 - 130	11	20
Xylenes, Total	15.0	16.6		ug/L		111	70 - 130	8	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	112		70 - 130
4-Bromofluorobenzene (Surr)	100		70 - 130
Toluene-d8 (Surr)	110		70 - 130

Method: 524.2 - Volatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 380-99491/5
Matrix: Water
Analysis Batch: 99491

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tertiary Butyl Alcohol (TBA)	<2.0		2.0	ug/L			07/17/24 15:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		70 - 130		07/17/24 15:57	1
4-Bromofluorobenzene (Surr)	96		70 - 130		07/17/24 15:57	1
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		07/17/24 15:57	1

Lab Sample ID: LCS 380-99491/2
Matrix: Water
Analysis Batch: 99491

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Tertiary Butyl Alcohol (TBA)	5.00	5.49		ug/L		110	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	95		70 - 130
1,2-Dichloroethane-d4 (Surr)	103		70 - 130

Lab Sample ID: LCSD 380-99491/3
Matrix: Water
Analysis Batch: 99491

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
Tertiary Butyl Alcohol (TBA)	5.00	5.61		ug/L		112	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	96		70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 524.2 - Volatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCSD 380-99491/3
Matrix: Water
Analysis Batch: 99491

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

Surrogate	LCS D %Recovery	LCS D Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		70 - 130

Lab Sample ID: MRL 380-99491/4
Matrix: Water
Analysis Batch: 99491

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Tertiary Butyl Alcohol (TBA)	2.00	2.71		ug/L		135	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
Toluene-d8 (Surr)	98		50 - 150
4-Bromofluorobenzene (Surr)	96		50 - 150
1,2-Dichloroethane-d4 (Surr)	100		50 - 150

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

Lab Sample ID: MB 380-99014/21-A
Matrix: Water
Analysis Batch: 99120

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 99014

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
2,4'-DDE	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
2,4'-DDT	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
2,4-Dinitrotoluene	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
2,6-Dinitrotoluene	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
4,4'-DDD	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
4,4'-DDE	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
4,4'-DDT	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Acenaphthene	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Acenaphthylene	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Acetochlor	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Alachlor	<0.050		0.050	ug/L		07/15/24 11:00	07/16/24 12:08	1
alpha-BHC	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
alpha-Chlordane	<0.050		0.050	ug/L		07/15/24 11:00	07/16/24 12:08	1
Anthracene	<0.020		0.020	ug/L		07/15/24 11:00	07/16/24 12:08	1
Atrazine	<0.050		0.050	ug/L		07/15/24 11:00	07/16/24 12:08	1
Benz(a)anthracene	<0.050		0.050	ug/L		07/15/24 11:00	07/16/24 12:08	1
Benzo[a]pyrene	<0.020		0.020	ug/L		07/15/24 11:00	07/16/24 12:08	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		07/15/24 11:00	07/16/24 12:08	1
Benzo[g,h,i]perylene	<0.050		0.050	ug/L		07/15/24 11:00	07/16/24 12:08	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		07/15/24 11:00	07/16/24 12:08	1
beta-BHC	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Bis(2-ethylhexyl) phthalate	<0.60		0.60	ug/L		07/15/24 11:00	07/16/24 12:08	1
Aldrin	<0.0099		0.0099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Bromacil	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Butachlor	<0.050		0.050	ug/L		07/15/24 11:00	07/16/24 12:08	1
Butylbenzylphthalate	<0.50		0.50	ug/L		07/15/24 11:00	07/16/24 12:08	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-103819-1
 SDG: Quarterly

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

Lab Sample ID: MB 380-99014/21-A
Matrix: Water
Analysis Batch: 99120

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 99014

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzilate	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Chloroneb	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Chlorpyrifos	<0.050		0.050	ug/L		07/15/24 11:00	07/16/24 12:08	1
Chrysene	<0.020		0.020	ug/L		07/15/24 11:00	07/16/24 12:08	1
delta-BHC	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Di(2-ethylhexyl)adipate	<0.60		0.60	ug/L		07/15/24 11:00	07/16/24 12:08	1
Dibenz(a,h)anthracene	<0.050		0.050	ug/L		07/15/24 11:00	07/16/24 12:08	1
Diclorvos (DDVP)	<0.050		0.050	ug/L		07/15/24 11:00	07/16/24 12:08	1
Dieldrin	<0.0099		0.0099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Diethylphthalate	<0.50		0.50	ug/L		07/15/24 11:00	07/16/24 12:08	1
Dimethylphthalate	<0.50		0.50	ug/L		07/15/24 11:00	07/16/24 12:08	1
Di-n-butyl phthalate	<0.99		0.99	ug/L		07/15/24 11:00	07/16/24 12:08	1
Di-n-octyl phthalate	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Endosulfan I (Alpha)	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Endosulfan II (Beta)	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Endosulfan sulfate	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Endrin	<0.0099		0.0099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Endrin aldehyde	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
EPTC	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Fluoranthene	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Fluorene	<0.050		0.050	ug/L		07/15/24 11:00	07/16/24 12:08	1
gamma-BHC (Lindane)	<0.0099		0.0099	ug/L		07/15/24 11:00	07/16/24 12:08	1
gamma-Chlordane	<0.050		0.050	ug/L		07/15/24 11:00	07/16/24 12:08	1
Heptachlor	<0.0099		0.0099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Heptachlor epoxide (isomer B)	<0.0099		0.0099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Hexachlorobenzene	<0.050		0.050	ug/L		07/15/24 11:00	07/16/24 12:08	1
Hexachlorocyclopentadiene	<0.050		0.050	ug/L		07/15/24 11:00	07/16/24 12:08	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050	ug/L		07/15/24 11:00	07/16/24 12:08	1
Isophorone	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Malathion	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Methoxychlor	<0.050		0.050	ug/L		07/15/24 11:00	07/16/24 12:08	1
Metolachlor	<0.050		0.050	ug/L		07/15/24 11:00	07/16/24 12:08	1
Molinate	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Naphthalene	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Parathion	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Pendimethalin (Penoxaline)	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Phenanthrene	<0.040		0.040	ug/L		07/15/24 11:00	07/16/24 12:08	1
Propachlor	<0.050		0.050	ug/L		07/15/24 11:00	07/16/24 12:08	1
Pyrene	<0.050		0.050	ug/L		07/15/24 11:00	07/16/24 12:08	1
Simazine	<0.050		0.050	ug/L		07/15/24 11:00	07/16/24 12:08	1
Terbacil	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Terbutylazine	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Thiobencarb	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		07/15/24 11:00	07/16/24 12:08	1
trans-Nonachlor	<0.050		0.050	ug/L		07/15/24 11:00	07/16/24 12:08	1
Trifluralin	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
1-Methylnaphthalene	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1
2-Methylnaphthalene	<0.099		0.099	ug/L		07/15/24 11:00	07/16/24 12:08	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

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

Tentatively Identified Compound	MB MB		Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
	Est. Result	Qualifier							
Camphene	0.933	T J N	ug/L		2.42	79-92-5	07/15/24 11:00	07/16/24 12:08	1
Decane	1.61	T J N	ug/L		2.50	124-18-5	07/15/24 11:00	07/16/24 12:08	1
Unknown	0.629	T J	ug/L		4.56	N/A	07/15/24 11:00	07/16/24 12:08	1
9-Octadecenamide, (Z)-	3.63	T J N	ug/L		7.78	301-02-0	07/15/24 11:00	07/16/24 12:08	1
Unknown	1.35	T J	ug/L		11.58	N/A	07/15/24 11:00	07/16/24 12:08	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Nitro-m-xylene	92		70 - 130	07/15/24 11:00	07/16/24 12:08	1
Perylene-d12	90		70 - 130	07/15/24 11:00	07/16/24 12:08	1
Triphenylphosphate	107		70 - 130	07/15/24 11:00	07/16/24 12:08	1

Lab Sample ID: LCS 380-99014/23-A
Matrix: Water
Analysis Batch: 99247

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 99014

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	1.99	2.08		ug/L		105	70 - 130
2,4'-DDE	1.99	1.89		ug/L		95	70 - 130
2,4'-DDT	1.99	2.07		ug/L		104	70 - 130
2,4-Dinitrotoluene	1.99	1.86		ug/L		94	70 - 130
2,6-Dinitrotoluene	1.99	1.92		ug/L		97	70 - 130
4,4'-DDD	1.99	2.02		ug/L		101	70 - 130
4,4'-DDE	1.99	2.01		ug/L		101	70 - 130
4,4'-DDT	1.99	1.89		ug/L		95	70 - 130
Acenaphthene	1.99	1.85		ug/L		93	70 - 130
Acenaphthylene	1.99	2.05		ug/L		103	70 - 130
Acetochlor	1.99	2.37		ug/L		119	70 - 130
Alachlor	1.99	2.19		ug/L		110	70 - 130
alpha-BHC	1.99	2.00		ug/L		101	70 - 130
alpha-Chlordane	1.99	2.19		ug/L		110	70 - 130
Anthracene	1.99	1.90		ug/L		96	70 - 130
Atrazine	1.99	1.98		ug/L		100	70 - 130
Benz(a)anthracene	1.99	1.95		ug/L		98	70 - 130
Benzo[a]pyrene	1.99	2.14		ug/L		107	70 - 130
Benzo[b]fluoranthene	1.99	2.05		ug/L		103	70 - 130
Benzo[g,h,i]perylene	1.99	2.36		ug/L		119	70 - 130
Benzo[k]fluoranthene	1.99	2.11		ug/L		106	70 - 130
beta-BHC	1.99	2.03		ug/L		102	70 - 130
Bis(2-ethylhexyl) phthalate	1.99	2.50		ug/L		126	70 - 130
Aldrin	1.99	1.77		ug/L		89	70 - 130
Bromacil	1.99	2.00		ug/L		101	70 - 130
Butachlor	1.99	2.24		ug/L		113	70 - 130
Butylbenzylphthalate	1.99	2.18		ug/L		110	70 - 130
Chlorobenzilate	1.99	2.02		ug/L		102	70 - 130
Chloroneb	1.99	1.89		ug/L		95	70 - 130
Chlorothalonil (Draconil, Bravo)	1.99	1.99		ug/L		100	70 - 130
Chlorpyrifos	1.99	2.04		ug/L		103	70 - 130
Chrysene	1.99	1.94		ug/L		98	70 - 130
delta-BHC	1.99	2.08		ug/L		105	70 - 130
Di(2-ethylhexyl)adipate	1.99	2.34		ug/L		117	70 - 130
Dibenz(a,h)anthracene	1.99	2.34		ug/L		118	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

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

Lab Sample ID: LCS 380-99014/23-A
Matrix: Water
Analysis Batch: 99247

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 99014

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diclorvos (DDVP)	1.99	2.16		ug/L		109	70 - 130
Dieldrin	1.99	1.97		ug/L		99	70 - 130
Diethylphthalate	1.99	2.02		ug/L		101	70 - 130
Dimethylphthalate	1.99	2.15		ug/L		108	70 - 130
Di-n-butyl phthalate	3.98	4.25		ug/L		107	70 - 130
Di-n-octyl phthalate	1.99	2.19		ug/L		110	70 - 130
Endosulfan I (Alpha)	1.99	2.04		ug/L		103	70 - 130
Endosulfan II (Beta)	1.99	2.10		ug/L		106	70 - 130
Endosulfan sulfate	1.99	1.97		ug/L		99	70 - 130
Endrin	1.99	1.77		ug/L		89	70 - 130
Endrin aldehyde	1.99	1.51		ug/L		76	60 - 130
EPTC	1.99	2.16		ug/L		109	70 - 130
Fluoranthene	1.99	2.02		ug/L		102	70 - 130
Fluorene	1.99	1.95		ug/L		98	70 - 130
gamma-BHC (Lindane)	1.99	1.97		ug/L		99	70 - 130
gamma-Chlordane	1.99	2.29		ug/L		115	70 - 130
Heptachlor	1.99	2.04		ug/L		102	70 - 130
Heptachlor epoxide (isomer B)	1.99	2.34		ug/L		118	70 - 130
Hexachlorobenzene	1.99	1.85		ug/L		93	70 - 130
Hexachlorocyclopentadiene	1.99	1.68		ug/L		84	70 - 130
Indeno[1,2,3-cd]pyrene	1.99	2.41		ug/L		121	70 - 130
Isophorone	1.99	2.18		ug/L		110	70 - 130
Malathion	1.99	2.14		ug/L		108	70 - 130
Methoxychlor	1.99	1.95		ug/L		98	70 - 130
Metolachlor	1.99	2.40		ug/L		121	70 - 130
Molinate	1.99	2.20		ug/L		111	70 - 130
Naphthalene	1.99	2.00		ug/L		100	70 - 130
Parathion	1.99	2.30		ug/L		116	70 - 130
Pendimethalin (Penoxaline)	1.99	1.95		ug/L		98	70 - 130
Phenanthrene	1.99	1.88		ug/L		95	70 - 130
Propachlor	1.99	2.07		ug/L		104	70 - 130
Pyrene	1.99	1.95		ug/L		98	70 - 130
Simazine	1.99	2.12		ug/L		107	70 - 130
Terbacil	1.99	2.33		ug/L		117	70 - 130
Terbutylazine	1.99	2.12		ug/L		107	70 - 130
Thiobencarb	1.99	2.23		ug/L		112	70 - 130
trans-Nonachlor	1.99	2.09		ug/L		105	70 - 130
Trifluralin	1.99	1.88		ug/L		95	70 - 130
1-Methylnaphthalene	1.99	2.04		ug/L		102	70 - 130
2-Methylnaphthalene	1.99	2.12		ug/L		107	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	101		70 - 130
Perylene-d12	101		70 - 130
Triphenylphosphate	105		70 - 130

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

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

Lab Sample ID: LCSD 380-99014/24-A
Matrix: Water
Analysis Batch: 99247

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 99014

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
2,4'-DDD	1.99	2.07		ug/L		104	70 - 130	1	20	
2,4'-DDE	1.99	1.91		ug/L		96	70 - 130	1	20	
2,4'-DDT	1.99	2.10		ug/L		106	70 - 130	2	20	
2,4-Dinitrotoluene	1.99	1.83		ug/L		92	70 - 130	2	20	
2,6-Dinitrotoluene	1.99	1.87		ug/L		94	70 - 130	3	20	
4,4'-DDD	1.99	2.01		ug/L		101	70 - 130	0	20	
4,4'-DDE	1.99	1.94		ug/L		98	70 - 130	4	20	
4,4'-DDT	1.99	1.92		ug/L		97	70 - 130	2	20	
Acenaphthene	1.99	1.87		ug/L		94	70 - 130	1	20	
Acenaphthylene	1.99	2.07		ug/L		104	70 - 130	1	20	
Acetochlor	1.99	2.29		ug/L		115	70 - 130	3	20	
Alachlor	1.99	2.16		ug/L		109	70 - 130	2	20	
alpha-BHC	1.99	1.96		ug/L		98	70 - 130	2	20	
alpha-Chlordane	1.99	2.19		ug/L		110	70 - 130	0	20	
Anthracene	1.99	1.86		ug/L		94	70 - 130	2	20	
Atrazine	1.99	1.97		ug/L		99	70 - 130	1	20	
Benz(a)anthracene	1.99	1.92		ug/L		97	70 - 130	2	20	
Benzo[a]pyrene	1.99	2.10		ug/L		105	70 - 130	2	20	
Benzo[b]fluoranthene	1.99	2.08		ug/L		105	70 - 130	2	20	
Benzo[g,h,i]perylene	1.99	2.25		ug/L		113	70 - 130	5	20	
Benzo[k]fluoranthene	1.99	2.00		ug/L		101	70 - 130	5	20	
beta-BHC	1.99	2.02		ug/L		102	70 - 130	0	20	
Bis(2-ethylhexyl) phthalate	1.99	2.47		ug/L		124	70 - 130	1	20	
Aldrin	1.99	1.74		ug/L		87	70 - 130	2	20	
Bromacil	1.99	1.89		ug/L		95	70 - 130	6	20	
Butachlor	1.99	2.21		ug/L		111	70 - 130	1	20	
Butylbenzylphthalate	1.99	2.16		ug/L		109	70 - 130	1	20	
Chlorobenzilate	1.99	1.85		ug/L		93	70 - 130	9	20	
Chloroneb	1.99	1.88		ug/L		95	70 - 130	1	20	
Chlorothalonil (Draconil, Bravo)	1.99	2.01		ug/L		101	70 - 130	1	20	
Chlorpyrifos	1.99	2.06		ug/L		104	70 - 130	1	20	
Chrysene	1.99	1.87		ug/L		94	70 - 130	4	20	
delta-BHC	1.99	2.12		ug/L		107	70 - 130	2	20	
Di(2-ethylhexyl)adipate	1.99	2.28		ug/L		115	70 - 130	2	20	
Dibenz(a,h)anthracene	1.99	2.26		ug/L		114	70 - 130	3	20	
Diclorvos (DDVP)	1.99	2.15		ug/L		108	70 - 130	1	20	
Dieldrin	1.99	1.95		ug/L		98	70 - 130	1	20	
Diethylphthalate	1.99	2.06		ug/L		103	70 - 130	2	20	
Dimethylphthalate	1.99	2.07		ug/L		104	70 - 130	4	20	
Di-n-butyl phthalate	3.97	4.22		ug/L		106	70 - 130	1	20	
Di-n-octyl phthalate	1.99	2.21		ug/L		111	70 - 130	1	20	
Endosulfan I (Alpha)	1.99	2.06		ug/L		104	70 - 130	1	20	
Endosulfan II (Beta)	1.99	2.07		ug/L		104	70 - 130	1	20	
Endosulfan sulfate	1.99	1.90		ug/L		96	70 - 130	4	20	
Endrin	1.99	1.71		ug/L		86	70 - 130	3	20	
Endrin aldehyde	1.99	1.45		ug/L		73	60 - 130	4	20	
EPTC	1.99	2.17		ug/L		109	70 - 130	0	20	
Fluoranthene	1.99	2.05		ug/L		103	70 - 130	2	20	

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

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

Lab Sample ID: LCSD 380-99014/24-A
Matrix: Water
Analysis Batch: 99247

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 99014

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluorene	1.99	2.01		ug/L		101	70 - 130	3	20
gamma-BHC (Lindane)	1.99	1.99		ug/L		100	70 - 130	1	20
gamma-Chlordane	1.99	2.20		ug/L		111	70 - 130	4	20
Heptachlor	1.99	2.03		ug/L		102	70 - 130	0	20
Heptachlor epoxide (isomer B)	1.99	2.21		ug/L		111	70 - 130	6	20
Hexachlorobenzene	1.99	1.88		ug/L		95	70 - 130	2	20
Hexachlorocyclopentadiene	1.99	1.65		ug/L		83	70 - 130	2	20
Indeno[1,2,3-cd]pyrene	1.99	2.32		ug/L		117	70 - 130	4	20
Isophorone	1.99	2.14		ug/L		108	70 - 130	2	20
Malathion	1.99	2.11		ug/L		106	70 - 130	2	20
Methoxychlor	1.99	1.97		ug/L		99	70 - 130	1	20
Metolachlor	1.99	2.22		ug/L		112	70 - 130	8	20
Molinate	1.99	2.22		ug/L		112	70 - 130	1	20
Naphthalene	1.99	2.02		ug/L		102	70 - 130	1	20
Parathion	1.99	2.25		ug/L		113	70 - 130	2	20
Pendimethalin (Penoxaline)	1.99	1.92		ug/L		97	70 - 130	1	20
Phenanthrene	1.99	1.89		ug/L		95	70 - 130	0	20
Propachlor	1.99	2.07		ug/L		104	70 - 130	0	20
Pyrene	1.99	1.98		ug/L		99	70 - 130	1	20
Simazine	1.99	2.14		ug/L		108	70 - 130	1	20
Terbacil	1.99	2.20		ug/L		111	70 - 130	6	20
Terbutylazine	1.99	2.21		ug/L		111	70 - 130	4	20
Thiobencarb	1.99	2.24		ug/L		113	70 - 130	0	20
trans-Nonachlor	1.99	2.07		ug/L		104	70 - 130	1	20
Trifluralin	1.99	1.77		ug/L		89	70 - 130	6	20
1-Methylnaphthalene	1.99	2.04		ug/L		103	70 - 130	0	20
2-Methylnaphthalene	1.99	2.11		ug/L		106	70 - 130	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2-Nitro-m-xylene	100		70 - 130
Perylene-d12	95		70 - 130
Triphenylphosphate	102		70 - 130

Lab Sample ID: MRL 380-99014/22-A
Matrix: Water
Analysis Batch: 99120

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 99014

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	0.0994	0.109		ug/L		110	50 - 150
2,4'-DDE	0.0994	0.110		ug/L		110	50 - 150
2,4'-DDT	0.0994	0.112		ug/L		113	50 - 150
2,4-Dinitrotoluene	0.0994	0.108		ug/L		109	50 - 150
2,6-Dinitrotoluene	0.0994	0.111		ug/L		111	50 - 150
4,4'-DDD	0.0994	0.112		ug/L		113	50 - 150
4,4'-DDE	0.0994	0.0845	J	ug/L		85	50 - 150
4,4'-DDT	0.0994	0.112		ug/L		113	50 - 150
Acenaphthene	0.0994	0.0981	J	ug/L		99	50 - 150
Acenaphthylene	0.0994	0.0911	J	ug/L		92	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

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

Lab Sample ID: MRL 380-99014/22-A
Matrix: Water
Analysis Batch: 99120

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 99014

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Acetochlor	0.0994	0.111		ug/L		111	50 - 150
Alachlor	0.0497	0.0581		ug/L		117	50 - 150
alpha-BHC	0.0994	0.116		ug/L		116	50 - 150
alpha-Chlordane	0.0249	<0.029		ug/L		104	50 - 150
Anthracene	0.0199	<0.019		ug/L		90	50 - 150
Atrazine	0.0497	<0.048		ug/L		96	50 - 150
Benz(a)anthracene	0.0497	0.0499	J	ug/L		100	50 - 150
Benzo[a]pyrene	0.0199	0.0171	J	ug/L		86	50 - 150
Benzo[b]fluoranthene	0.0199	0.0217		ug/L		109	50 - 150
Benzo[g,h,i]perylene	0.0497	0.0512		ug/L		103	50 - 150
Benzo[k]fluoranthene	0.0199	0.0205		ug/L		103	50 - 150
beta-BHC	0.0994	0.122		ug/L		122	50 - 150
Bis(2-ethylhexyl) phthalate	0.596	0.519	J	ug/L		87	50 - 150
Aldrin	0.00994	<0.0099		ug/L		65	50 - 150
Bromacil	0.0994	0.138		ug/L		139	50 - 150
Butachlor	0.0497	0.0599		ug/L		121	50 - 150
Butylbenzylphthalate	0.497	0.582		ug/L		117	50 - 150
Chlorobenzilate	0.0994	0.111		ug/L		112	50 - 150
Chloroneb	0.0994	0.0981	J	ug/L		99	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0994	0.101		ug/L		101	50 - 150
Chlorpyrifos	0.0497	0.0601		ug/L		121	50 - 150
Chrysene	0.0199	0.0223		ug/L		112	50 - 150
delta-BHC	0.0994	0.122		ug/L		122	50 - 150
Di(2-ethylhexyl)adipate	0.596	0.657		ug/L		110	50 - 150
Dibenz(a,h)anthracene	0.0497	0.0462	J	ug/L		93	50 - 150
Diclorvos (DDVP)	0.0497	0.0702		ug/L		141	50 - 150
Dieldrin	0.00994	0.0119		ug/L		120	50 - 150
Diethylphthalate	0.497	0.515		ug/L		104	50 - 150
Dimethylphthalate	0.497	0.545		ug/L		110	50 - 150
Di-n-butyl phthalate	0.497	0.476	J	ug/L		96	49 - 243
Di-n-octyl phthalate	0.0994	0.0995		ug/L		100	50 - 150
Endosulfan I (Alpha)	0.0994	0.102		ug/L		103	50 - 150
Endosulfan II (Beta)	0.0994	0.132		ug/L		133	50 - 150
Endosulfan sulfate	0.0994	0.122		ug/L		123	50 - 150
Endrin	0.00994	0.0104		ug/L		105	50 - 150
Endrin aldehyde	0.0994	0.0939	J	ug/L		94	50 - 150
EPTC	0.0994	0.0995		ug/L		100	50 - 150
Fluoranthene	0.0994	0.103		ug/L		104	50 - 150
Fluorene	0.0497	<0.050		ug/L		99	50 - 150
gamma-BHC (Lindane)	0.00994	0.0110		ug/L		111	50 - 150
gamma-Chlordane	0.0249	0.0316	J	ug/L		127	50 - 150
Heptachlor	0.00994	0.0149		ug/L		150	50 - 150
Heptachlor epoxide (isomer B)	0.00994	0.0141		ug/L		141	50 - 150
Hexachlorobenzene	0.0497	0.0506		ug/L		102	50 - 150
Hexachlorocyclopentadiene	0.0497	0.0464	J	ug/L		93	50 - 150
Indeno[1,2,3-cd]pyrene	0.0497	0.0493	J	ug/L		99	50 - 150
Isophorone	0.0994	0.124		ug/L		125	50 - 150
Malathion	0.0994	0.117		ug/L		118	50 - 150
Methoxychlor	0.0497	0.0754	^3+	ug/L		152	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

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

Lab Sample ID: MRL 380-99014/22-A
Matrix: Water
Analysis Batch: 99120

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 99014

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Metolachlor	0.0497	0.0604		ug/L		121	50 - 150
Molinate	0.0994	0.118		ug/L		119	50 - 150
Naphthalene	0.0994	0.0955	J	ug/L		96	50 - 150
Parathion	0.0994	0.114		ug/L		114	50 - 150
Pendimethalin (Penoxaline)	0.0994	0.116		ug/L		117	50 - 150
Phenanthrene	0.0398	0.0435		ug/L		109	50 - 150
Propachlor	0.0497	0.0515		ug/L		104	50 - 150
Pyrene	0.0497	0.0486	J	ug/L		98	50 - 150
Simazine	0.0497	0.0543		ug/L		109	50 - 150
Terbacil	0.0994	0.120		ug/L		121	50 - 150
Terbutylazine	0.0994	0.0951	J	ug/L		96	50 - 150
Thiobencarb	0.0994	0.129		ug/L		129	50 - 150
trans-Nonachlor	0.0249	0.0309	J	ug/L		124	50 - 150
Trifluralin	0.0994	0.0962	J	ug/L		97	50 - 150
1-Methylnaphthalene	0.0994	0.0986	J	ug/L		99	50 - 150
2-Methylnaphthalene	0.0994	0.0924	J	ug/L		93	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	93		70 - 130
Perylene-d12	91		70 - 130
Triphenylphosphate	103		70 - 130

Lab Sample ID: 380-103652-O-1-A MS
Matrix: Water
Analysis Batch: 99120

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 99014

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	<0.097		1.93	2.02		ug/L		104	70 - 130
2,4'-DDE	<0.097		1.93	1.77		ug/L		92	70 - 130
2,4'-DDT	<0.097		1.93	2.11		ug/L		109	70 - 130
2,4-Dinitrotoluene	<0.097		1.93	1.86		ug/L		96	70 - 130
2,6-Dinitrotoluene	<0.097		1.93	1.94		ug/L		100	70 - 130
4,4'-DDD	<0.097		1.93	2.14		ug/L		111	70 - 130
4,4'-DDE	<0.097		1.93	1.96		ug/L		102	70 - 130
4,4'-DDT	<0.097		1.93	1.96		ug/L		101	70 - 130
Acenaphthene	<0.097		1.93	2.15		ug/L		111	70 - 130
Acenaphthylene	<0.097		1.93	2.06		ug/L		107	70 - 130
Acetochlor	<0.097		1.93	2.17		ug/L		112	70 - 130
Alachlor	<0.048		1.93	2.19		ug/L		113	70 - 130
alpha-BHC	<0.097		1.93	1.89		ug/L		98	70 - 130
alpha-Chlordane	<0.048		1.93	2.06		ug/L		107	70 - 130
Anthracene	<0.019		1.93	1.50		ug/L		77	70 - 130
Atrazine	<0.048		1.93	2.03		ug/L		105	70 - 130
Benz(a)anthracene	<0.048		1.93	1.95		ug/L		101	70 - 130
Benzo[a]pyrene	<0.019		1.93	1.97		ug/L		102	70 - 130
Benzo[b]fluoranthene	<0.019		1.93	2.08		ug/L		108	70 - 130
Benzo[g,h,i]perylene	<0.048		1.93	1.87		ug/L		97	70 - 130
Benzo[k]fluoranthene	<0.019		1.93	2.09		ug/L		108	70 - 130

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

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

Lab Sample ID: 380-103652-O-1-A MS
Matrix: Water
Analysis Batch: 99120

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 99014

Analyte	Sample	Sample Qualifier	Spike Added	MS	MS Qualifier	Unit	D	%Rec	%Rec
	Result			Result					Limits
beta-BHC	<0.097		1.93	1.83		ug/L		95	70 - 130
Bis(2-ethylhexyl) phthalate	<0.58		1.93	1.75		ug/L		91	70 - 130
Aldrin	<0.0097		1.93	1.75		ug/L		90	70 - 130
Bromacil	<0.097		1.93	2.23		ug/L		112	70 - 130
Butachlor	<0.048		1.93	2.13		ug/L		110	70 - 130
Butylbenzylphthalate	<0.48		1.93	2.22		ug/L		115	70 - 130
Chlorobenzilate	<0.097		1.93	1.85		ug/L		96	70 - 130
Chloroneb	<0.097		1.93	2.01		ug/L		104	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.097		1.93	1.71		ug/L		89	70 - 130
Chlorpyrifos	<0.048		1.93	1.94		ug/L		100	70 - 130
Chrysene	<0.019		1.93	2.10		ug/L		109	70 - 130
delta-BHC	<0.097		1.93	1.95		ug/L		101	70 - 130
Di(2-ethylhexyl)adipate	<0.58		1.93	2.06		ug/L		106	70 - 130
Dibenz(a,h)anthracene	<0.048		1.93	1.87		ug/L		97	70 - 130
Diclorvos (DDVP)	<0.048		1.93	2.23		ug/L		115	70 - 130
Dieldrin	<0.0097		1.93	1.70		ug/L		88	70 - 130
Diethylphthalate	<0.48		1.93	2.03		ug/L		105	70 - 130
Dimethylphthalate	<0.48		1.93	2.10		ug/L		108	70 - 130
Di-n-butyl phthalate	<0.97		3.87	4.16		ug/L		107	70 - 130
Di-n-octyl phthalate	<0.097		1.93	1.58		ug/L		82	70 - 130
Endosulfan I (Alpha)	<0.097		1.93	1.85		ug/L		96	70 - 130
Endosulfan II (Beta)	<0.097		1.93	2.07		ug/L		107	70 - 130
Endosulfan sulfate	<0.097		1.93	1.93		ug/L		100	70 - 130
Endrin	<0.0097		1.93	1.94		ug/L		100	70 - 130
Endrin aldehyde	<0.097		1.93	1.18		ug/L		61	60 - 130
EPTC	<0.097		1.93	2.03		ug/L		105	70 - 130
Fluoranthene	<0.097		1.93	2.03		ug/L		105	70 - 130
Fluorene	<0.048		1.93	2.05		ug/L		106	70 - 130
gamma-BHC (Lindane)	<0.0097		1.93	1.80		ug/L		93	70 - 130
gamma-Chlordane	<0.048		1.93	2.00		ug/L		103	70 - 130
Heptachlor	<0.0097		1.93	1.86		ug/L		96	70 - 130
Heptachlor epoxide (isomer B)	<0.0097		1.93	2.20		ug/L		114	70 - 130
Hexachlorobenzene	<0.048		1.93	1.85		ug/L		96	70 - 130
Hexachlorocyclopentadiene	<0.048		1.93	1.81		ug/L		94	70 - 130
Indeno[1,2,3-cd]pyrene	<0.048		1.93	1.87		ug/L		97	70 - 130
Isophorone	<0.097		1.93	1.94		ug/L		100	70 - 130
Malathion	<0.097		1.93	2.05		ug/L		106	70 - 130
Methoxychlor	<0.048	^3+	1.93	2.28		ug/L		118	70 - 130
Metolachlor	<0.048		1.93	2.39		ug/L		124	70 - 130
Molinate	<0.097		1.93	2.05		ug/L		106	70 - 130
Naphthalene	<0.097		1.93	1.63		ug/L		84	70 - 130
Parathion	<0.097		1.93	2.26		ug/L		117	70 - 130
Pendimethalin (Penoxaline)	<0.097		1.93	1.92		ug/L		99	70 - 130
Phenanthrene	<0.039		1.93	1.81		ug/L		94	70 - 130
Propachlor	<0.048		1.93	1.95		ug/L		101	70 - 130
Pyrene	<0.048		1.93	1.91		ug/L		99	70 - 130
Simazine	<0.048		1.93	1.92		ug/L		100	70 - 130
Terbacil	<0.097		1.93	2.08		ug/L		108	70 - 130
Terbutylazine	<0.097		1.93	2.02		ug/L		104	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

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

Lab Sample ID: 380-103652-O-1-A MS
Matrix: Water
Analysis Batch: 99120

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 99014

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Thiobencarb	<0.097		1.93	1.94		ug/L		100	70 - 130
trans-Nonachlor	<0.048		1.93	1.93		ug/L		100	70 - 130
Trifluralin	<0.097		1.93	1.69		ug/L		87	70 - 130
1-Methylnaphthalene	<0.097		1.93	1.97		ug/L		102	70 - 130
2-Methylnaphthalene	<0.097		1.93	1.96		ug/L		101	70 - 130

Surrogate	MS %Recovery	MS Qualifier	MS Limits
2-Nitro-m-xylene	94		70 - 130
Perylene-d12	96		70 - 130
Triphenylphosphate	108		70 - 130

Lab Sample ID: 380-103673-O-1-A DU
Matrix: Water
Analysis Batch: 99120

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 99014

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
2,4'-DDD	<0.097		<0.097		ug/L		NC	20
2,4'-DDE	<0.097		<0.097		ug/L		NC	20
2,4'-DDT	<0.097		<0.097		ug/L		NC	20
2,4-Dinitrotoluene	<0.097		<0.097		ug/L		NC	20
2,6-Dinitrotoluene	<0.097		<0.097		ug/L		NC	20
4,4'-DDD	<0.097		<0.097		ug/L		NC	20
4,4'-DDE	<0.097		<0.097		ug/L		NC	20
4,4'-DDT	<0.097		<0.097		ug/L		NC	20
Acenaphthene	<0.097		<0.097		ug/L		NC	20
Acenaphthylene	<0.097		<0.097		ug/L		NC	20
Acetochlor	<0.097		<0.097		ug/L		NC	20
Alachlor	<0.048		<0.048		ug/L		NC	20
alpha-BHC	<0.097		<0.097		ug/L		NC	20
alpha-Chlordane	<0.048		<0.048		ug/L		NC	20
Anthracene	<0.019		<0.019		ug/L		NC	20
Atrazine	<0.048		<0.048		ug/L		NC	20
Benz(a)anthracene	<0.048		<0.048		ug/L		NC	20
Benzo[a]pyrene	<0.019		<0.019		ug/L		NC	20
Benzo[b]fluoranthene	<0.019		<0.019		ug/L		NC	20
Benzo[g,h,i]perylene	<0.048		<0.048		ug/L		NC	20
Benzo[k]fluoranthene	<0.019		<0.019		ug/L		NC	20
beta-BHC	<0.097		<0.097		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	<0.58		<0.58		ug/L		NC	20
Aldrin	<0.0097		<0.0097		ug/L		NC	20
Bromacil	<0.097		<0.097		ug/L		NC	20
Butachlor	<0.048		<0.048		ug/L		NC	20
Butylbenzylphthalate	<0.48		<0.48		ug/L		NC	20
Chlorobenzilate	<0.097		<0.097		ug/L		NC	20
Chloroneb	<0.097		<0.097		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	<0.097		<0.097		ug/L		NC	20
Chlorpyrifos	<0.048		<0.048		ug/L		NC	20
Chrysene	<0.019		<0.019		ug/L		NC	20

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

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

Lab Sample ID: 380-103673-O-1-A DU
Matrix: Water
Analysis Batch: 99120

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 99014

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
delta-BHC	<0.097		<0.097		ug/L		NC	20
Di(2-ethylhexyl)adipate	<0.58		<0.58		ug/L		NC	20
Dibenz(a,h)anthracene	<0.048		<0.048		ug/L		NC	20
Diclorvos (DDVP)	<0.048		<0.048		ug/L		NC	20
Dieldrin	0.048		0.0441		ug/L		9	20
Diethylphthalate	<0.48		<0.48		ug/L		NC	20
Dimethylphthalate	<0.48		<0.48		ug/L		NC	20
Di-n-butyl phthalate	<0.97		<0.97		ug/L		NC	20
Di-n-octyl phthalate	<0.097		<0.097		ug/L		NC	20
Endosulfan I (Alpha)	<0.097		<0.097		ug/L		NC	20
Endosulfan II (Beta)	<0.097		<0.097		ug/L		NC	20
Endosulfan sulfate	<0.097		<0.097		ug/L		NC	20
Endrin	<0.0097		<0.0097		ug/L		NC	20
Endrin aldehyde	<0.097		<0.097		ug/L		NC	20
EPTC	<0.097		<0.097		ug/L		NC	20
Fluoranthene	<0.097		<0.097		ug/L		NC	20
Fluorene	<0.048		<0.048		ug/L		NC	20
gamma-BHC (Lindane)	<0.0097		<0.0097		ug/L		NC	20
gamma-Chlordane	<0.048		<0.048		ug/L		NC	20
Heptachlor	<0.0097		<0.0097		ug/L		NC	20
Heptachlor epoxide (isomer B)	0.014		<0.0097		ug/L		NC	20
Hexachlorobenzene	<0.048		<0.048		ug/L		NC	20
Hexachlorocyclopentadiene	<0.048		<0.048		ug/L		NC	20
Indeno[1,2,3-cd]pyrene	<0.048		<0.048		ug/L		NC	20
Isophorone	<0.097		<0.097		ug/L		NC	20
Malathion	<0.097		<0.097		ug/L		NC	20
Methoxychlor	<0.048	^3+	<0.048		ug/L		NC	20
Metolachlor	<0.048		<0.048		ug/L		NC	20
Molinate	<0.097		<0.097		ug/L		NC	20
Naphthalene	<0.097		<0.097		ug/L		NC	20
Parathion	<0.097		<0.097		ug/L		NC	20
Pendimethalin (Penoxaline)	<0.097		<0.097		ug/L		NC	20
Phenanthrene	<0.039		<0.039		ug/L		NC	20
Propachlor	<0.048		<0.048		ug/L		NC	20
Pyrene	<0.048		<0.048		ug/L		NC	20
Simazine	<0.048		<0.048		ug/L		NC	20
Terbacil	<0.097		<0.097		ug/L		NC	20
Terbutylazine	<0.097		<0.097		ug/L		NC	20
Thiobencarb	<0.097		<0.097		ug/L		NC	20
Total Permethrin (mixed isomers)	<0.19		<0.19		ug/L		NC	20
trans-Nonachlor	<0.048		<0.048		ug/L		NC	20
Trifluralin	<0.097		<0.097		ug/L		NC	20
1-Methylnaphthalene	<0.097		<0.097		ug/L		NC	20
2-Methylnaphthalene	<0.097		<0.097		ug/L		NC	20

Surrogate	DU %Recovery	DU Qualifier	Limits
2-Nitro-m-xylene	93		70 - 130
Perylene-d12	94		70 - 130

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

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

Lab Sample ID: 380-103673-O-1-A DU
Matrix: Water
Analysis Batch: 99120

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 99014

Surrogate	%Recovery	DU DU Qualifier	Limits
Triphenylphosphate	102		70 - 130

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

Lab Sample ID: MB 570-460222/1-A
Matrix: Water
Analysis Batch: 466731

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 460222

Tentatively Identified Compound	Est. Result	MB MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	07/15/24 05:12	08/02/24 19:16	1

Surrogate	%Recovery	MB MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	45		33 - 139	07/15/24 05:12	08/02/24 19:16	1
2-Fluorobiphenyl (Surr)	59		33 - 126	07/15/24 05:12	08/02/24 19:16	1
2-Fluorophenol (Surr)	41		12 - 120	07/15/24 05:12	08/02/24 19:16	1
Nitrobenzene-d5 (Surr)	53		36 - 120	07/15/24 05:12	08/02/24 19:16	1
Phenol-d6 (Surr)	26		10 - 120	07/15/24 05:12	08/02/24 19:16	1
p-Terphenyl-d14 (Surr)	71		47 - 131	07/15/24 05:12	08/02/24 19:16	1

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

Lab Sample ID: MB 570-460222/1-A
Matrix: Water
Analysis Batch: 466820

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 460222

Analyte	MB MB Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
2,4,5-Trichlorophenol	<5.0		5.0	ug/L		07/15/24 05:12	08/02/24 12:18	1
2,4,6-Trichlorophenol	<1.0		1.0	ug/L		07/15/24 05:12	08/02/24 12:18	1
2,4-Dichlorophenol	<1.0		1.0	ug/L		07/15/24 05:12	08/02/24 12:18	1
2,4-Dinitrophenol	<5.0		5.0	ug/L		07/15/24 05:12	08/02/24 12:18	1
2,6-Dichlorophenol	<5.0		5.0	ug/L		07/15/24 05:12	08/02/24 12:18	1
2-Chloronaphthalene	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
2-Chlorophenol	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
2-Methylnaphthalene	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
2-Methylphenol	<1.0		1.0	ug/L		07/15/24 05:12	08/02/24 12:18	1
2-Nitroaniline	<5.0		5.0	ug/L		07/15/24 05:12	08/02/24 12:18	1
2-Nitrophenol	<5.0		5.0	ug/L		07/15/24 05:12	08/02/24 12:18	1
3/4-Methylphenol	<2.0		2.0	ug/L		07/15/24 05:12	08/02/24 12:18	1
3-Nitroaniline	<5.0		5.0	ug/L		07/15/24 05:12	08/02/24 12:18	1
4,6-Dinitro-2-methylphenol	<5.0		5.0	ug/L		07/15/24 05:12	08/02/24 12:18	1
4-Bromophenyl phenyl ether	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
4-Chloro-3-methylphenol	<1.0		1.0	ug/L		07/15/24 05:12	08/02/24 12:18	1
4-Chloroaniline	<5.0		5.0	ug/L		07/15/24 05:12	08/02/24 12:18	1
4-Chlorophenyl phenyl ether	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
4-Nitroaniline	<5.0		5.0	ug/L		07/15/24 05:12	08/02/24 12:18	1
4-Nitrophenol	<5.0		5.0	ug/L		07/15/24 05:12	08/02/24 12:18	1
Acenaphthene	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

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

Lab Sample ID: MB 570-460222/1-A
Matrix: Water
Analysis Batch: 466820

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 460222

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
Aniline	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
Anthracene	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
Benzidine	<5.0		5.0	ug/L		07/15/24 05:12	08/02/24 12:18	1
Benzo[a]anthracene	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
Benzo[a]pyrene	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
Benzo[b]fluoranthene	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
Benzo[g,h,i]perylene	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
Benzo[k]fluoranthene	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
Benzoic acid	<10		10	ug/L		07/15/24 05:12	08/02/24 12:18	1
Benzyl alcohol	<1.0		1.0	ug/L		07/15/24 05:12	08/02/24 12:18	1
Bis(2-chloroethoxy)methane	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
Bis(2-chloroethyl)ether	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
bis (2-Chloroisopropyl) ether	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
Chrysene	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
Dibenz(a,h)anthracene	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
Dibenzofuran	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
Fluoranthene	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
Fluorene	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
Hexachloroethane	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
Indeno[1,2,3-cd]pyrene	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
Naphthalene	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
Nitrobenzene	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
N-Nitrosodi-n-propylamine	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
N-Nitrosodiphenylamine	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
Pentachlorophenol	<1.0		1.0	ug/L		07/15/24 05:12	08/02/24 12:18	1
Phenanthrene	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1
Phenol	<1.0		1.0	ug/L		07/15/24 05:12	08/02/24 12:18	1
Pyrene	<0.20		0.20	ug/L		07/15/24 05:12	08/02/24 12:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	70		28 - 127	07/15/24 05:12	08/02/24 12:18	1
2-Fluorobiphenyl (Surr)	61		31 - 120	07/15/24 05:12	08/02/24 12:18	1
2-Fluorophenol (Surr)	53		17 - 120	07/15/24 05:12	08/02/24 12:18	1
Nitrobenzene-d5 (Surr)	68		27 - 120	07/15/24 05:12	08/02/24 12:18	1
Phenol-d6 (Surr)	37		10 - 120	07/15/24 05:12	08/02/24 12:18	1
p-Terphenyl-d14 (Surr)	80		45 - 120	07/15/24 05:12	08/02/24 12:18	1

Lab Sample ID: LCS 570-460222/2-A
Matrix: Water
Analysis Batch: 465376

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 460222

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	20.0	14.5		ug/L		72	47 - 120
2,4,5-Trichlorophenol	20.0	17.9		ug/L		89	57 - 120
2,4,6-Trichlorophenol	20.0	16.5		ug/L		82	52 - 129
2,4-Dichlorophenol	20.0	15.8		ug/L		79	53 - 122
2,4-Dinitrophenol	20.0	18.3		ug/L		92	1 - 173

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

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

Lab Sample ID: LCS 570-460222/2-A
Matrix: Water
Analysis Batch: 465376

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 460222

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,6-Dichlorophenol	20.0	16.0		ug/L		80	50 - 120
2-Chloronaphthalene	20.0	14.5		ug/L		73	65 - 120
2-Chlorophenol	20.0	15.6		ug/L		78	36 - 120
2-Methylnaphthalene	20.0	14.3		ug/L		71	43 - 120
2-Methylphenol	20.0	15.8		ug/L		79	46 - 120
2-Nitroaniline	20.0	17.4		ug/L		87	51 - 125
2-Nitrophenol	20.0	14.2		ug/L		71	45 - 167
3/4-Methylphenol	40.0	30.8		ug/L		77	29 - 120
3-Nitroaniline	20.0	9.53	*-	ug/L		48	62 - 129
4,6-Dinitro-2-methylphenol	20.0	14.7		ug/L		74	53 - 130
4-Bromophenyl phenyl ether	20.0	16.0		ug/L		80	65 - 120
4-Chloro-3-methylphenol	20.0	16.5		ug/L		83	41 - 128
4-Chloroaniline	20.0	3.21	J *-	ug/L		16	51 - 120
4-Chlorophenyl phenyl ether	20.0	15.3		ug/L		76	38 - 145
4-Nitroaniline	20.0	16.1		ug/L		80	64 - 129
4-Nitrophenol	20.0	8.97		ug/L		45	13 - 129
Acenaphthene	20.0	14.9		ug/L		74	60 - 132
Acenaphthylene	20.0	17.4		ug/L		87	54 - 126
Aniline	20.0	0.782	*-	ug/L		4	52 - 121
Anthracene	20.0	16.2		ug/L		81	43 - 120
Benzidine	20.0	<0.94	*-	ug/L		0	20 - 164
Benzo[a]anthracene	20.0	16.1		ug/L		81	42 - 133
Benzo[a]pyrene	20.0	17.0		ug/L		85	32 - 148
Benzo[b]fluoranthene	20.0	18.3		ug/L		91	42 - 140
Benzo[g,h,i]perylene	20.0	19.1		ug/L		96	1 - 195
Benzo[k]fluoranthene	20.0	18.3		ug/L		92	25 - 146
Benzoic acid	20.0	8.05	J	ug/L		40	20 - 120
Benzyl alcohol	20.0	18.8		ug/L		94	44 - 122
Bis(2-chloroethoxy)methane	20.0	14.2		ug/L		71	49 - 165
Bis(2-chloroethyl)ether	20.0	14.8		ug/L		74	43 - 126
bis (2-Chloroisopropyl) ether	20.0	15.3		ug/L		77	63 - 139
Chrysene	20.0	16.2		ug/L		81	44 - 140
Dibenz(a,h)anthracene	20.0	17.0		ug/L		85	1 - 200
Dibenzofuran	20.0	15.4		ug/L		77	48 - 120
Fluoranthene	20.0	17.3		ug/L		86	43 - 121
Fluorene	20.0	15.8		ug/L		79	70 - 120
Hexachloroethane	20.0	13.0		ug/L		65	55 - 120
Indeno[1,2,3-cd]pyrene	20.0	15.9		ug/L		79	1 - 151
Naphthalene	20.0	13.7		ug/L		68	36 - 120
Nitrobenzene	20.0	14.7		ug/L		74	54 - 158
N-Nitrosodi-n-propylamine	20.0	17.1		ug/L		85	14 - 198
N-Nitrosodiphenylamine	20.0	20.1		ug/L		101	65 - 133
Pentachlorophenol	20.0	15.5		ug/L		78	38 - 152
Phenanthrene	20.0	15.6		ug/L		78	65 - 120
Phenol	20.0	8.10		ug/L		41	17 - 120
Pyrene	20.0	15.5		ug/L		78	70 - 120

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

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

Lab Sample ID: LCS 570-460222/2-A
Matrix: Water
Analysis Batch: 465376

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 460222

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	73		28 - 127
2-Fluorobiphenyl (Surr)	70		31 - 120
2-Fluorophenol (Surr)	53		17 - 120
Nitrobenzene-d5 (Surr)	69		27 - 120
Phenol d6 (Surr)	38		10 - 120
p-Terphenyl-d14 (Surr)	73		45 - 120

Lab Sample ID: LCSD 570-460222/3-A
Matrix: Water
Analysis Batch: 465376

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 460222

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	20.0	13.5		ug/L		67	47 - 120	7	20
2,4,5-Trichlorophenol	20.0	18.3		ug/L		92	57 - 120	2	20
2,4,6-Trichlorophenol	20.0	17.2		ug/L		86	52 - 129	4	35
2,4-Dichlorophenol	20.0	15.0		ug/L		75	53 - 122	5	30
2,4-Dinitrophenol	20.0	19.9		ug/L		100	1 - 173	8	79
2,6-Dichlorophenol	20.0	15.0		ug/L		75	50 - 120	6	20
2-Chloronaphthalene	20.0	14.9		ug/L		74	65 - 120	2	15
2-Chlorophenol	20.0	15.6		ug/L		78	36 - 120	0	37
2-Methylnaphthalene	20.0	13.3		ug/L		66	43 - 120	7	20
2-Methylphenol	20.0	15.6		ug/L		78	46 - 120	1	20
2-Nitroaniline	20.0	18.0		ug/L		90	51 - 125	4	20
2-Nitrophenol	20.0	13.0		ug/L		65	45 - 167	9	33
3/4-Methylphenol	40.0	30.6		ug/L		76	29 - 120	1	20
3-Nitroaniline	20.0	15.2	*1	ug/L		76	62 - 129	46	20
4,6-Dinitro-2-methylphenol	20.0	15.8		ug/L		79	53 - 130	7	122
4-Bromophenyl phenyl ether	20.0	17.4		ug/L		87	65 - 120	8	26
4-Chloro-3-methylphenol	20.0	15.6		ug/L		78	41 - 128	5	44
4-Chloroaniline	20.0	3.06	J *-	ug/L		15	51 - 120	5	20
4-Chlorophenyl phenyl ether	20.0	16.0		ug/L		80	38 - 145	5	36
4-Nitroaniline	20.0	17.9		ug/L		89	64 - 129	11	20
4-Nitrophenol	20.0	9.55		ug/L		48	13 - 129	6	79
Acenaphthene	20.0	15.4		ug/L		77	60 - 132	4	29
Acenaphthylene	20.0	18.2		ug/L		91	54 - 126	4	45
Aniline	20.0	1.54	*- *1	ug/L		8	52 - 121	66	21
Anthracene	20.0	17.5		ug/L		88	43 - 120	8	40
Benzidine	20.0	<0.94	*-	ug/L		0	20 - 164	NC	30
Benzo[a]anthracene	20.0	17.8		ug/L		89	42 - 133	10	32
Benzo[a]pyrene	20.0	18.6		ug/L		93	32 - 148	9	43
Benzo[b]fluoranthene	20.0	19.7		ug/L		99	42 - 140	8	43
Benzo[g,h,i]perylene	20.0	21.5		ug/L		108	1 - 195	12	61
Benzo[k]fluoranthene	20.0	20.6		ug/L		103	25 - 146	12	38
Benzoic acid	20.0	7.66	J	ug/L		38	20 - 120	5	30
Benzyl alcohol	20.0	17.2		ug/L		86	44 - 122	9	20
Bis(2-chloroethoxy)methane	20.0	13.6		ug/L		68	49 - 165	4	32
Bis(2-chloroethyl)ether	20.0	14.5		ug/L		73	43 - 126	2	65
bis (2-Chloroisopropyl) ether	20.0	15.2		ug/L		76	63 - 139	1	46

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

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

Lab Sample ID: LCSD 570-460222/3-A
Matrix: Water
Analysis Batch: 465376

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 460222

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chrysene	20.0	17.5		ug/L		88	44 - 140	8	53
Dibenz(a,h)anthracene	20.0	18.4		ug/L		92	1 - 200	8	75
Dibenzofuran	20.0	16.4		ug/L		82	48 - 120	6	20
Fluoranthene	20.0	19.1		ug/L		95	43 - 121	10	40
Fluorene	20.0	16.6		ug/L		83	70 - 120	5	23
Hexachloroethane	20.0	12.7		ug/L		64	55 - 120	2	32
Indeno[1,2,3-cd]pyrene	20.0	18.0		ug/L		90	1 - 151	13	60
Naphthalene	20.0	12.4		ug/L		62	36 - 120	10	39
Nitrobenzene	20.0	13.3		ug/L		66	54 - 158	10	37
N-Nitrosodi-n-propylamine	20.0	16.9		ug/L		84	14 - 198	1	52
N-Nitrosodiphenylamine	20.0	21.7		ug/L		109	65 - 133	8	20
Pentachlorophenol	20.0	16.6		ug/L		83	38 - 152	7	52
Phenanthrene	20.0	16.9		ug/L		84	65 - 120	8	24
Phenol	20.0	8.08		ug/L		40	17 - 120	0	39
Pyrene	20.0	16.8		ug/L		84	70 - 120	8	30

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2,4,6-Tribromophenol (Surr)	81		28 - 127
2-Fluorobiphenyl (Surr)	71		31 - 120
2-Fluorophenol (Surr)	51		17 - 120
Nitrobenzene-d5 (Surr)	62		27 - 120
Phenol-d6 (Surr)	37		10 - 120
p-Terphenyl-d14 (Surr)	80		45 - 120

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

Lab Sample ID: MB 570-460706/6
Matrix: Water
Analysis Batch: 460706

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			07/16/24 13:13	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		38 - 134		07/16/24 13:13	1

Lab Sample ID: LCS 570-460706/4
Matrix: Water
Analysis Batch: 460706

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	401		ug/L		100	78 - 120

Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits
4-Bromofluorobenzene (Surr)	99		38 - 134

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

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

Lab Sample ID: LCSD 570-460706/5
Matrix: Water
Analysis Batch: 460706

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	400		ug/L		100	78 - 120	0	10
Surrogate		LCS	D						
4-Bromofluorobenzene (Surr)		101							38 - 134

Lab Sample ID: MRL 570-460706/3
Matrix: Water
Analysis Batch: 460706

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	10.0	11.6		ug/L		116	50 - 150
Surrogate		MRL	Qual				
4-Bromofluorobenzene (Surr)		94					38 - 134

Lab Sample ID: 380-103360-C-3 MS
Matrix: Water
Analysis Batch: 460706

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	372		ug/L		93	68 - 122
Surrogate		MS		MS	Qual				
4-Bromofluorobenzene (Surr)		95							38 - 134

Lab Sample ID: 380-103360-C-3 MSD
Matrix: Water
Analysis Batch: 460706

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	376		ug/L		94	68 - 122	1	18
Surrogate		MSD		MSD	Qual						
4-Bromofluorobenzene (Surr)		100									38 - 134

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Lab Sample ID: MBL 380-100477/4-A
Matrix: Water
Analysis Batch: 100734

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 100477

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	<0.0040		0.020	ug/L		07/24/24 12:00	07/24/24 15:59	1
1,2-Dibromo-3-Chloropropane	<0.0020		0.010	ug/L		07/24/24 12:00	07/24/24 15:59	1
1,2-Dibromoethane	<0.0040		0.010	ug/L		07/24/24 12:00	07/24/24 15:59	1

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QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC) (Continued)

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dibromopropane (Surr)	96		60 - 140	07/24/24 12:00	07/24/24 15:59	1

Lab Sample ID: LCS 380-100477/29-A
Matrix: Water
Analysis Batch: 100734

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 100477

<i>Analyte</i>	<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>Limits</i>
1,2,3-Trichloropropane	0.200	0.210		ug/L		105	70 - 130
1,2-Dibromo-3-Chloropropane	0.200	0.199		ug/L		99	70 - 130
1,2-Dibromoethane	0.200	0.201		ug/L		100	70 - 130

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
1,2-Dibromopropane (Surr)	95		60 - 140

Lab Sample ID: MRL 380-100477/2-A
Matrix: Water
Analysis Batch: 100734

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 100477

<i>Analyte</i>	<i>Spike Added</i>	<i>MRL Result</i>	<i>MRL Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>Limits</i>
1,2,3-Trichloropropane	0.0200	0.0205		ug/L		103	60 - 140

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
1,2-Dibromopropane (Surr)	94		60 - 140

Lab Sample ID: MRL 380-100477/3-A
Matrix: Water
Analysis Batch: 100734

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 100477

<i>Analyte</i>	<i>Spike Added</i>	<i>MRL Result</i>	<i>MRL Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>Limits</i>
1,2,3-Trichloropropane	0.0500	0.0488		ug/L		98	60 - 140
1,2-Dibromo-3-Chloropropane	0.0100	0.0101		ug/L		101	60 - 140
1,2-Dibromoethane	0.0100	0.00985	J	ug/L		99	60 - 140

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
1,2-Dibromopropane (Surr)	93		60 - 140

Lab Sample ID: 380-104963-BU-1-A MS
Matrix: Water
Analysis Batch: 100734

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 100477

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>Spike Added</i>	<i>MS Result</i>	<i>MS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>Limits</i>
1,2,3-Trichloropropane	<0.020		1.25	1.24		ug/L		99	65 - 135
1,2-Dibromo-3-Chloropropane	<0.010		0.251	0.247		ug/L		98	65 - 135
1,2-Dibromoethane	<0.010		0.251	0.251		ug/L		100	65 - 135

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
1,2-Dibromopropane (Surr)	92		60 - 140

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: 380-104963-BV-1-A DU
Matrix: Water
Analysis Batch: 100734

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 100477

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
1,2,3-Trichloropropane	<0.020		<0.020		ug/L		NC	20
1,2-Dibromo-3-Chloropropane	<0.010		<0.0099		ug/L		NC	20
1,2-Dibromoethane	<0.010		<0.0099		ug/L		NC	20
		DU	DU					
Surrogate	%Recovery	Qualifier	Limits					
1,2-Dibromopropane (Surr)	95		60 - 140					

Lab Sample ID: MBL 380-99690/4-A
Matrix: Water
Analysis Batch: 99836

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 99690

Analyte	MBL	MBL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1,2,3-Trichloropropane	<0.0040		0.020	ug/L		07/18/24 15:00	07/18/24 18:57	1
1,2-Dibromo-3-Chloropropane	<0.0020		0.010	ug/L		07/18/24 15:00	07/18/24 18:57	1
1,2-Dibromoethane	<0.0040		0.010	ug/L		07/18/24 15:00	07/18/24 18:57	1
		MBL	MBL					
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed			
1,2-Dibromopropane (Surr)	97		60 - 140	07/18/24 15:00	07/18/24 18:57	1		

Lab Sample ID: LCS 380-99690/29-A
Matrix: Water
Analysis Batch: 99836

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 99690

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dibromo-3-Chloropropane	0.200	0.182		ug/L		91	70 - 130
1,2-Dibromoethane	0.200	0.207		ug/L		103	70 - 130
		LCS	LCS				
Surrogate	%Recovery	Qualifier	Limits				
1,2-Dibromopropane (Surr)	92		60 - 140				

Lab Sample ID: MRL 380-99690/2-A
Matrix: Water
Analysis Batch: 99836

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 99690

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
		MRL	MRL				
Surrogate	%Recovery	Qualifier	Limits				
1,2-Dibromopropane (Surr)	94		60 - 140				

Lab Sample ID: MRL 380-99690/3-A
Matrix: Water
Analysis Batch: 99836

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 99690

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits

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QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: MRL 380-99690/3-A
Matrix: Water
Analysis Batch: 99836

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 99690

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dibromo-3-Chloropropane	0.0100	0.0104		ug/L		104	60 - 140
1,2-Dibromoethane	0.0100	0.00881	J	ug/L		88	60 - 140
Surrogate	MRL %Recovery	MRL Qualifier	Limits				
1,2-Dibromopropane (Surr)	99		60 - 140				

Lab Sample ID: 380-103787-G-1-A MS
Matrix: Water
Analysis Batch: 99836

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 99690

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	<0.020		1.28	1.22		ug/L		95	65 - 135
1,2-Dibromo-3-Chloropropane	<0.010		0.256	0.245		ug/L		96	65 - 135
1,2-Dibromoethane	<0.010		0.256	0.256		ug/L		100	65 - 135
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,2-Dibromopropane (Surr)	97		60 - 140						

Lab Sample ID: 380-103895-P-1-A DU
Matrix: Water
Analysis Batch: 99836

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 99690

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
1,2,3-Trichloropropane	<0.020		<0.020		ug/L		NC	20
1,2-Dibromo-3-Chloropropane	<0.010		<0.010		ug/L		NC	20
1,2-Dibromoethane	<0.010		<0.010		ug/L		NC	20
Surrogate	DU %Recovery	DU Qualifier	Limits					
1,2-Dibromopropane (Surr)	97		60 - 140					

Method: 505 - Organochlorine Pesticides/PCBs (GC)

Lab Sample ID: MB 380-99012/3-A
Matrix: Water
Analysis Batch: 99738

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 99012

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene	<0.50		0.50	ug/L		07/16/24 14:20	07/16/24 17:15	1
Chlordane (n.o.s.)	<0.10		0.10	ug/L		07/16/24 14:20	07/16/24 17:15	1
PCB-1016	<0.070		0.070	ug/L		07/16/24 14:20	07/16/24 17:15	1
PCB-1221	<0.10		0.10	ug/L		07/16/24 14:20	07/16/24 17:15	1
PCB-1232	<0.10		0.10	ug/L		07/16/24 14:20	07/16/24 17:15	1
PCB-1242	<0.10		0.10	ug/L		07/16/24 14:20	07/16/24 17:15	1
PCB-1248	<0.10		0.10	ug/L		07/16/24 14:20	07/16/24 17:15	1
PCB-1254	<0.10		0.10	ug/L		07/16/24 14:20	07/16/24 17:15	1
PCB-1260	<0.070		0.070	ug/L		07/16/24 14:20	07/16/24 17:15	1
Polychlorinated biphenyls, Total	<0.10		0.10	ug/L		07/16/24 14:20	07/16/24 17:15	1

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QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 505 - Organochlorine Pesticides/PCBs (GC) (Continued)

Lab Sample ID: MB 380-99012/3-A
Matrix: Water
Analysis Batch: 99738

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 99012

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	101		70 - 130	07/16/24 14:20	07/16/24 17:15	1

Lab Sample ID: LCS 380-99012/31-A
Matrix: Water
Analysis Batch: 99738

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 99012

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	103		70 - 130

Lab Sample ID: LCSD 380-99012/32-A
Matrix: Water
Analysis Batch: 99738

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 99012

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	104		70 - 130

Lab Sample ID: MRL 380-99012/1-A
Matrix: Water
Analysis Batch: 99738

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 99012

Surrogate	MRL MRL		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	103		70 - 130

Lab Sample ID: MRL 380-99012/2-A
Matrix: Water
Analysis Batch: 99738

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 99012

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chlordane (n.o.s.)	0.100	0.101		ug/L		101	50 - 150

Surrogate	MRL MRL		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	101		70 - 130

Lab Sample ID: 380-102321-AN-1-A MS
Matrix: Water
Analysis Batch: 99738

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 99012

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chlordane (n.o.s.)	<0.10		0.507	0.484		ug/L		95	65 - 135

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	105		70 - 130

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 505 - Organochlorine Pesticides/PCBs (GC) (Continued)

Lab Sample ID: 380-102321-AP-1-A MS
Matrix: Water
Analysis Batch: 99738

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 99012

Surrogate	%Recovery	MS MS Qualifier	Limits
Tetrachloro-m-xylene	99		70 - 130

Lab Sample ID: 380-102326-AL-1-A MS
Matrix: Water
Analysis Batch: 99738

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 99012

Surrogate	%Recovery	MS MS Qualifier	Limits
Tetrachloro-m-xylene	103		70 - 130

Lab Sample ID: 380-102326-AR-1-A MS
Matrix: Water
Analysis Batch: 99738

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 99012

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chlordane (n.o.s.)	<0.10		0.497	0.478		ug/L		96	65 - 135

Surrogate	%Recovery	MS MS Qualifier	Limits
Tetrachloro-m-xylene	104		70 - 130

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

Lab Sample ID: MB 570-460900/1-A
Matrix: Water
Analysis Batch: 462205

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 460900

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<25		25	ug/L		07/16/24 16:05	07/20/24 13:31	1
Motor Oil Range Organics [C24-C36]	<25		25	ug/L		07/16/24 16:05	07/20/24 13:31	1
C8-C18	<25		25	ug/L		07/16/24 16:05	07/20/24 13:31	1

Surrogate	%Recovery	MB MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	100		60 - 130	07/16/24 16:05	07/20/24 13:31	1

Lab Sample ID: LCS 570-460900/2-A
Matrix: Water
Analysis Batch: 462205

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 460900

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C10-C28	1600	1430		ug/L		89	56 - 127

Surrogate	%Recovery	LCS LCS Qualifier	Limits
n-Octacosane (Surr)	104		60 - 130

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

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

Lab Sample ID: LCSD 570-460900/3-A
Matrix: Water
Analysis Batch: 462205

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 460900

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28	1600	1520		ug/L		95	56 - 127	6	23
Surrogate									
		%Recovery	Qualifier	Limits					
<i>n-Octacosane (Surr)</i>		106		60 - 130					

Lab Sample ID: MRL 570-460900/4-A
Matrix: Water
Analysis Batch: 462205

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 460900

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28	0.0200	<0.020		mg/L		99	50 - 150		
Surrogate									
		%Recovery	Qualifier	Limits					
<i>n-Octacosane (Surr)</i>		98		60 - 130					

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC)

Lab Sample ID: MB 570-460498/3
Matrix: Water
Analysis Batch: 460498

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
Ethanol	<0.10		0.10	mg/L			07/15/24 17:46	1	
Surrogate									
	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
<i>Hexafluoro-2-propanol (Surr)</i>	96		54 - 120				07/15/24 17:46	1	

Lab Sample ID: LCS 570-460498/4
Matrix: Water
Analysis Batch: 460498

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethanol	2.00	2.04		mg/L		102	78 - 131		
Surrogate									
		%Recovery	Qualifier	Limits					
<i>Hexafluoro-2-propanol (Surr)</i>		110		54 - 120					

Lab Sample ID: LCSD 570-460498/5
Matrix: Water
Analysis Batch: 460498

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
Ethanol	2.00	2.19		mg/L		110	78 - 131	7	25
Surrogate									
		%Recovery	Qualifier	Limits					
<i>Hexafluoro-2-propanol (Surr)</i>		109		54 - 120					

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC) (Continued)

Lab Sample ID: MRL 570-460498/6
Matrix: Water
Analysis Batch: 460498

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Ethanol	0.100	0.0849	J	mg/L		85	50 - 150
Surrogate	%Recovery	MRL	Qualifier	Limits			
Hexafluoro-2-propanol (Surr)	91			54 - 120			

Lab Sample ID: 380-103361-AI-1 MS
Matrix: Water
Analysis Batch: 460498

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
Ethanol	<0.10		2.00	2.06		mg/L		103	20 - 173
Surrogate	%Recovery	MS	Qualifier	Limits					
Hexafluoro-2-propanol (Surr)	98			54 - 120					

Lab Sample ID: 380-103361-AI-1 MSD
Matrix: Water
Analysis Batch: 460498

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
Ethanol	<0.10		2.00	2.05		mg/L		103	20 - 173	1	21
Surrogate	%Recovery	MSD	Qualifier	Limits							
Hexafluoro-2-propanol (Surr)	105			54 - 120							

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 380-98834/4
Matrix: Water
Analysis Batch: 98834

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.050		0.050	mg/L			07/12/24 11:12	1
Nitrite as N	<0.050		0.050	mg/L			07/12/24 11:12	1

Lab Sample ID: LCS 380-98834/7
Matrix: Water
Analysis Batch: 98834

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	2.50	2.50		mg/L		100	90 - 110
Nitrite as N	1.00	0.985		mg/L		99	90 - 110

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 380-98834/8
Matrix: Water
Analysis Batch: 98834

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
Nitrate as N	2.50	2.52		mg/L		101	90 - 110	1	20
Nitrite as N	1.00	0.984		mg/L		98	90 - 110	0	20

Lab Sample ID: MRL 380-98834/5
Matrix: Water
Analysis Batch: 98834

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.0125	0.0142	J	mg/L		114	50 - 150
Nitrite as N	0.0125	0.0126	J	mg/L		101	50 - 150

Lab Sample ID: MRL 380-98834/6
Matrix: Water
Analysis Batch: 98834

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.0500	0.0501		mg/L		100	50 - 150
Nitrite as N	0.0500	0.0490	J	mg/L		98	50 - 150

Lab Sample ID: 380-103820-AT-1 MS
Matrix: Water
Analysis Batch: 98834

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
Nitrate as N	0.16		1.25	1.42		mg/L		101	80 - 120
Nitrite as N	<0.050		0.500	0.453		mg/L		91	80 - 120

Lab Sample ID: 380-103820-AT-1 MSD
Matrix: Water
Analysis Batch: 98834

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
Nitrate as N	0.16		1.25	1.41		mg/L		100	80 - 120	1	20
Nitrite as N	<0.050		0.500	0.448		mg/L		90	80 - 120	1	20

Lab Sample ID: MB 380-98835/4
Matrix: Water
Analysis Batch: 98835

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.50		0.50	mg/L			07/12/24 11:12	1
Sulfate	<0.25		0.25	mg/L			07/12/24 11:12	1

Lab Sample ID: LCS 380-98835/7
Matrix: Water
Analysis Batch: 98835

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	25.6		mg/L		102	90 - 110
Sulfate	50.0	50.5		mg/L		101	90 - 110

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QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCSD 380-98835/8
Matrix: Water
Analysis Batch: 98835

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
Chloride	25.0	25.8		mg/L		103	90 - 110	1	20
Sulfate	50.0	50.9		mg/L		102	90 - 110	1	20

Lab Sample ID: MRL 380-98835/5
Matrix: Water
Analysis Batch: 98835

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	0.125	0.152	J	mg/L		121	50 - 150
Sulfate	0.250	0.280		mg/L		112	50 - 150

Lab Sample ID: MRL 380-98835/6
Matrix: Water
Analysis Batch: 98835

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	0.500	0.471	J	mg/L		94	50 - 150
Sulfate	0.999	0.994		mg/L		100	50 - 150

Lab Sample ID: 380-103820-AT-1 MS
Matrix: Water
Analysis Batch: 98835

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
Chloride	52	E	12.5	62.5	E 4	mg/L		85	80 - 120
Sulfate	2.5		25.0	28.0		mg/L		102	80 - 120

Lab Sample ID: 380-103820-AT-1 MSD
Matrix: Water
Analysis Batch: 98835

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
Chloride	52	E	12.5	62.3	E 4	mg/L		84	80 - 120	0	20
Sulfate	2.5		25.0	27.7		mg/L		101	80 - 120	1	20

Lab Sample ID: MB 380-99559/8
Matrix: Water
Analysis Batch: 99559

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<5.0		5.0	ug/L			07/17/24 18:37	1

Lab Sample ID: LCS 380-99559/9
Matrix: Water
Analysis Batch: 99559

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	100	96.9		ug/L		97	90 - 110

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 380-99559/10
Matrix: Water
Analysis Batch: 99559

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
Bromide	100	99.5		ug/L		100	90 - 110	3	10

Lab Sample ID: MRL 380-99559/11
Matrix: Water
Analysis Batch: 99559

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	5.00	5.75		ug/L		115	75 - 125

Lab Sample ID: 380-103836-C-1 MS
Matrix: Water
Analysis Batch: 99559

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
Bromide	240		50.0	289	4	ug/L		92	80 - 120

Lab Sample ID: 380-103836-C-1 MSD
Matrix: Water
Analysis Batch: 99559

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
Bromide	240		50.0	295	4	ug/L		104	80 - 120	2	20

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 380-99245/156
Matrix: Water
Analysis Batch: 99245

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<1.0		1.0	mg/L			07/15/24 23:24	1
Magnesium	<0.10		0.10	mg/L			07/15/24 23:24	1
Potassium	<1.0		1.0	mg/L			07/15/24 23:24	1
Sodium	<1.0		1.0	mg/L			07/15/24 23:24	1

Lab Sample ID: LCS 380-99245/160
Matrix: Water
Analysis Batch: 99245

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	50.0	54.1		mg/L		108	85 - 115
Magnesium	20.0	20.9		mg/L		104	85 - 115
Potassium	20.0	21.2		mg/L		106	85 - 115
Sodium	50.0	52.3		mg/L		105	85 - 115

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: LCSD 380-99245/161
Matrix: Water
Analysis Batch: 99245

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
Calcium	50.0	54.5		mg/L		109	85 - 115	1	20
Magnesium	20.0	21.2		mg/L		106	85 - 115	1	20
Potassium	20.0	21.5		mg/L		107	85 - 115	1	20
Sodium	50.0	53.3		mg/L		107	85 - 115	2	20

Lab Sample ID: LLCS 380-99245/159
Matrix: Water
Analysis Batch: 99245

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	1.00	1.06		mg/L		106	50 - 150
Magnesium	0.100	0.0981	J	mg/L		98	50 - 150
Potassium	1.00	0.801	J	mg/L		80	50 - 150
Sodium	1.00	1.05		mg/L		105	50 - 150

Lab Sample ID: 380-103777-Z-1 MS
Matrix: Water
Analysis Batch: 99245

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
Calcium	70		50.0	116		mg/L		92	70 - 130
Magnesium	29		20.0	47.4		mg/L		94	70 - 130
Potassium	1.9		20.0	23.6		mg/L		109	70 - 130
Sodium	18		50.0	67.3		mg/L		98	70 - 130

Lab Sample ID: 380-103777-Z-1 MSD
Matrix: Water
Analysis Batch: 99245

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
Calcium	70		50.0	118		mg/L		96	70 - 130	2	20
Magnesium	29		20.0	48.1		mg/L		98	70 - 130	2	20
Potassium	1.9		20.0	24.3		mg/L		112	70 - 130	3	20
Sodium	18		50.0	69.0		mg/L		102	70 - 130	2	20

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MBL 380-99151/59
Matrix: Water
Analysis Batch: 99151

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

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.48		1.0	ug/L			07/15/24 16:13	1
Arsenic	<0.49		1.0	ug/L			07/15/24 16:13	1
Beryllium	<0.18		1.0	ug/L			07/15/24 16:13	1
Cadmium	<0.081		0.50	ug/L			07/15/24 16:13	1
Chromium	<0.80		1.0	ug/L			07/15/24 16:13	1
Copper	<0.27		2.0	ug/L			07/15/24 16:13	1
Lead	<0.29		0.50	ug/L			07/15/24 16:13	1
Nickel	<0.38		5.0	ug/L			07/15/24 16:13	1

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QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MBL 380-99151/59
Matrix: Water
Analysis Batch: 99151

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

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	<1.0		5.0	ug/L			07/15/24 16:13	1
Silver	<0.40		0.50	ug/L			07/15/24 16:13	1
Thallium	<0.32		1.0	ug/L			07/15/24 16:13	1
Zinc	<4.3		20	ug/L			07/15/24 16:13	1

Lab Sample ID: LCS 380-99151/61
Matrix: Water
Analysis Batch: 99151

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	50.0	49.6		ug/L		99	85 - 115
Arsenic	50.0	48.3		ug/L		97	85 - 115
Beryllium	25.0	23.3		ug/L		93	85 - 115
Cadmium	25.0	24.4		ug/L		98	85 - 115
Chromium	50.0	51.0		ug/L		102	85 - 115
Copper	50.0	49.4		ug/L		99	85 - 115
Lead	50.0	49.7		ug/L		99	85 - 115
Nickel	50.0	48.9		ug/L		98	85 - 115
Selenium	50.0	47.3		ug/L		95	85 - 115
Silver	25.0	24.9		ug/L		99	85 - 115
Thallium	50.0	48.3		ug/L		97	85 - 115
Zinc	50.0	48.0		ug/L		96	85 - 115

Lab Sample ID: LCSD 380-99151/62
Matrix: Water
Analysis Batch: 99151

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
Antimony	50.0	49.9		ug/L		100	85 - 115	1	20
Arsenic	50.0	48.8		ug/L		98	85 - 115	1	20
Beryllium	25.0	24.1		ug/L		96	85 - 115	3	20
Cadmium	25.0	24.8		ug/L		99	85 - 115	1	20
Chromium	50.0	52.0		ug/L		104	85 - 115	2	20
Copper	50.0	49.6		ug/L		99	85 - 115	0	20
Lead	50.0	51.3		ug/L		103	85 - 115	3	20
Nickel	50.0	49.3		ug/L		99	85 - 115	1	20
Selenium	50.0	48.0		ug/L		96	85 - 115	1	20
Silver	25.0	25.8		ug/L		103	85 - 115	4	20
Thallium	50.0	50.2		ug/L		100	85 - 115	4	20
Zinc	50.0	48.6		ug/L		97	85 - 115	1	20

Lab Sample ID: LLCS 380-99151/60
Matrix: Water
Analysis Batch: 99151

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	1.00	0.998	J	ug/L		100	50 - 150
Arsenic	1.00	1.00		ug/L		100	50 - 150
Beryllium	1.00	0.963	J	ug/L		96	50 - 150

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QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LLCS 380-99151/60
Matrix: Water
Analysis Batch: 99151

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Cadmium	0.500	0.505		ug/L		101	50 - 150
Chromium	1.00	1.34		ug/L		134	50 - 150
Copper	2.00	2.07		ug/L		104	50 - 150
Lead	0.500	0.555		ug/L		111	50 - 150
Nickel	5.00	4.97	J	ug/L		99	50 - 150
Selenium	5.00	4.75	J	ug/L		95	50 - 150
Silver	0.500	0.446	J	ug/L		89	50 - 150
Thallium	1.00	0.982	J	ug/L		98	50 - 150
Zinc	20.0	19.9	J	ug/L		99	50 - 150

Lab Sample ID: 380-103807-Q-1 MS
Matrix: Water
Analysis Batch: 99151

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
Antimony	<1.0		50.0	49.4		ug/L		99	70 - 130
Arsenic	<1.0		50.0	50.0		ug/L		100	70 - 130
Beryllium	<1.0		25.0	25.1		ug/L		101	70 - 130
Cadmium	<0.50		25.0	25.4		ug/L		102	70 - 130
Chromium	<1.0		50.0	52.0		ug/L		104	70 - 130
Copper	<2.0		50.0	50.3		ug/L		101	70 - 130
Lead	<0.50		50.0	50.0		ug/L		100	70 - 130
Nickel	<5.0		50.0	49.8		ug/L		100	70 - 130
Selenium	<5.0		50.0	50.9		ug/L		102	70 - 130
Silver	<0.50		25.0	24.8		ug/L		99	70 - 130
Thallium	<1.0		50.0	49.9		ug/L		100	70 - 130
Zinc	<20		50.0	52.2		ug/L		104	70 - 130

Lab Sample ID: 380-103807-Q-1 MSD
Matrix: Water
Analysis Batch: 99151

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
Antimony	<1.0		50.0	49.3		ug/L		99	70 - 130	0	20
Arsenic	<1.0		50.0	50.3		ug/L		101	70 - 130	1	20
Beryllium	<1.0		25.0	25.1		ug/L		100	70 - 130	0	20
Cadmium	<0.50		25.0	25.3		ug/L		101	70 - 130	0	20
Chromium	<1.0		50.0	51.7		ug/L		103	70 - 130	1	20
Copper	<2.0		50.0	50.1		ug/L		100	70 - 130	0	20
Lead	<0.50		50.0	51.3		ug/L		103	70 - 130	2	20
Nickel	<5.0		50.0	49.8		ug/L		100	70 - 130	0	20
Selenium	<5.0		50.0	51.8		ug/L		104	70 - 130	2	20
Silver	<0.50		25.0	24.8		ug/L		99	70 - 130	0	20
Thallium	<1.0		50.0	50.6		ug/L		101	70 - 130	1	20
Zinc	<20		50.0	52.0		ug/L		104	70 - 130	0	20

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 810-106193/1-A
Matrix: Water
Analysis Batch: 106279

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 106193

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.10		0.10	ug/L		07/17/24 12:24	07/17/24 17:37	1

Lab Sample ID: LCS 810-106193/3-A
Matrix: Water
Analysis Batch: 106279

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 106193

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	1.00	0.944		ug/L		94	85 - 115

Lab Sample ID: LLCS 810-106193/2-A
Matrix: Water
Analysis Batch: 106279

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 106193

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.100	0.136		ug/L		136	50 - 150

Lab Sample ID: 810-111329-G-1-E MS
Matrix: Water
Analysis Batch: 106279

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 106193

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	<0.10		1.00	1.11		ug/L		111	70 - 130

Lab Sample ID: 810-111329-G-1-F MSD
Matrix: Water
Analysis Batch: 106279

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 106193

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.10		1.00	1.00		ug/L		100	70 - 130	10	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 380-99786/1
Matrix: Water
Analysis Batch: 99786

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<2.0		2.0	mg/L			07/18/24 15:33	1
Bicarbonate Alkalinity as CaCO3	<2.0		2.0	mg/L			07/18/24 15:33	1
Carbonate Alkalinity as CaCO3	<2.0		2.0	mg/L			07/18/24 15:33	1

Lab Sample ID: LCS 380-99786/3
Matrix: Water
Analysis Batch: 99786

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	96.7		mg/L		97	90 - 110

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCSD 380-99786/18
Matrix: Water
Analysis Batch: 99786

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
Alkalinity	100	98.2		mg/L		98	90 - 110	1	20

Lab Sample ID: LLCS 380-99786/4
Matrix: Water
Analysis Batch: 99786

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	20.0	19.3		mg/L		97	90 - 110		

Lab Sample ID: MRL 380-99786/2
Matrix: Water
Analysis Batch: 99786

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	2.00	1.96	J	mg/L		98	50 - 150		

Lab Sample ID: 380-103777-Y-1 MS
Matrix: Water
Analysis Batch: 99786

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	RPD	RPD Limit
Alkalinity	130	F1	100	172	F1	mg/L		37	80 - 120		

Lab Sample ID: 380-103777-Y-1 MSD
Matrix: Water
Analysis Batch: 99786

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
Alkalinity	130	F1	100	174	F1	mg/L		39	80 - 120	1	20

Lab Sample ID: 380-103777-Y-1 DU
Matrix: Water
Analysis Batch: 99786

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	130	F1		122		mg/L				10	20
Bicarbonate Alkalinity as CaCO3	130			122		mg/L				10	20
Carbonate Alkalinity as CaCO3	<2.0			<2.0		mg/L				NC	20

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 380-99789/2
Matrix: Water
Analysis Batch: 99789

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<2.0		2.0	umhos/cm			07/18/24 15:33	1

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QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: SM 2510B - Conductivity, Specific Conductance (Continued)

Lab Sample ID: LCS 380-99789/4
Matrix: Water
Analysis Batch: 99789

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	1000	1000		umhos/cm		100	90 - 110

Lab Sample ID: LCSD 380-99789/16
Matrix: Water
Analysis Batch: 99789

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
Specific Conductance	1000	997		umhos/cm		100	90 - 110	1	10

Lab Sample ID: MRL 380-99789/3
Matrix: Water
Analysis Batch: 99789

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	2.00	2.00		umhos/cm		100	50 - 150

Lab Sample ID: 380-103777-Y-1 DU
Matrix: Water
Analysis Batch: 99789

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	600		566		umhos/cm		5	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 380-99260/1
Matrix: Water
Analysis Batch: 99260

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	mg/L			07/16/24 15:19	1

Lab Sample ID: HLCS 380-99260/5
Matrix: Water
Analysis Batch: 99260

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

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	700	694		mg/L		99	80 - 114

Lab Sample ID: LCS 380-99260/4
Matrix: Water
Analysis Batch: 99260

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	175	170		mg/L		97	80 - 114

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: MRL 380-99260/2
Matrix: Water
Analysis Batch: 99260

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	10.0	9.00	J	mg/L		90	50 - 150

Lab Sample ID: MRL 380-99260/3
Matrix: Water
Analysis Batch: 99260

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	10.0	8.00	J	mg/L		80	50 - 150

Lab Sample ID: 380-103808-I-1 DU
Matrix: Water
Analysis Batch: 99260

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	420		414		mg/L		0.5	10

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 380-100089/40
Matrix: Water
Analysis Batch: 100089

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.050		0.050	mg/L			07/19/24 16:58	1

Lab Sample ID: MB 380-100089/6
Matrix: Water
Analysis Batch: 100089

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.050		0.050	mg/L			07/19/24 14:39	1

Lab Sample ID: LCS 380-100089/42
Matrix: Water
Analysis Batch: 100089

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	1.00	0.998		mg/L		100	90 - 110

Lab Sample ID: LCSD 380-100089/43
Matrix: Water
Analysis Batch: 100089

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
Fluoride	1.00	1.00		mg/L		100	90 - 110	1	10

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: MRL 380-100089/41
Matrix: Water
Analysis Batch: 100089

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.0500	0.0497	J	mg/L		99	50 - 150

Lab Sample ID: MRL 380-100089/7
Matrix: Water
Analysis Batch: 100089

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.0500	0.0499	J	mg/L		100	50 - 150

Lab Sample ID: 380-103819-1 MS
Matrix: Drinking Water
Analysis Batch: 100089

Client Sample ID: AIEA GULCH WELLS PUMP 2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	<0.050		1.00	1.08		mg/L		104	80 - 120

Lab Sample ID: 380-103819-1 MSD
Matrix: Drinking Water
Analysis Batch: 100089

Client Sample ID: AIEA GULCH WELLS PUMP 2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	<0.050		1.00	1.06		mg/L		102	80 - 120	2	20

Method: SM 4500 H+ B - pH

Lab Sample ID: MB 380-99791/4
Matrix: Water
Analysis Batch: 99791

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.5			SU			07/18/24 15:33	1

Lab Sample ID: LCS 380-99791/5
Matrix: Water
Analysis Batch: 99791

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	6.00	6.0		SU		100	98 - 102

Lab Sample ID: LCSD 380-99791/17
Matrix: Water
Analysis Batch: 99791

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
pH	6.00	6.0		SU		100	98 - 102	0	2

QC Sample Results

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

Job ID: 380-103819-1
SDG: Quarterly

Method: SM 4500 H+ B - pH (Continued)

Lab Sample ID: 380-103777-Y-1 DU
Matrix: Water
Analysis Batch: 99791

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	8.1		8.2		SU		0.2	2

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MBL 380-98842/2
Matrix: Water
Analysis Batch: 98842

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

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.0099		0.050	mg/L			07/12/24 15:49	1

Lab Sample ID: LCS 380-98842/5
Matrix: Water
Analysis Batch: 98842

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	0.250	0.241		mg/L		96	90 - 110

Lab Sample ID: LCSD 380-98842/6
Matrix: Water
Analysis Batch: 98842

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
Sulfide	0.250	0.242		mg/L		97	90 - 110	0	20

Lab Sample ID: MRL 380-98842/3
Matrix: Water
Analysis Batch: 98842

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	0.0500	0.0454	J	mg/L		91	50 - 150

Lab Sample ID: 380-103673-I-1 MS
Matrix: Water
Analysis Batch: 98842

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
Sulfide	<0.050	F1	0.250	0.156	F1	mg/L		63	80 - 120

Lab Sample ID: 380-103673-I-1 MSD
Matrix: Water
Analysis Batch: 98842

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
Sulfide	<0.050	F1	0.250	0.169	F1	mg/L		67	80 - 120	8	20

QC Association Summary

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

Job ID: 380-103819-1
SDG: Quarterly

GC/MS VOA

Analysis Batch: 99491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	524.2	
380-103819-2	TRAVEL BLANK	Total/NA	Water	524.2	
MB 380-99491/5	Method Blank	Total/NA	Water	524.2	
LCS 380-99491/2	Lab Control Sample	Total/NA	Water	524.2	
LCSD 380-99491/3	Lab Control Sample Dup	Total/NA	Water	524.2	
MRL 380-99491/4	Lab Control Sample	Total/NA	Water	524.2	

Analysis Batch: 99494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 380-99494/8	Method Blank	Total/NA	Water	524.2	
LCS 380-99494/5	Lab Control Sample	Total/NA	Water	524.2	
LCSD 380-99494/6	Lab Control Sample Dup	Total/NA	Water	524.2	
MRL 380-99494/3	Lab Control Sample	Total/NA	Water	524.2	
MRL 380-99494/4	Lab Control Sample	Total/NA	Water	524.2	

Analysis Batch: 99547

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	524.2	
380-103819-2	TRAVEL BLANK	Total/NA	Water	524.2	
MB 380-99547/5	Method Blank	Total/NA	Water	524.2	
LCS 380-99547/3	Lab Control Sample	Total/NA	Water	524.2	
LCSD 380-99547/4	Lab Control Sample Dup	Total/NA	Water	524.2	

Analysis Batch: 99754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	524.2	
380-103819-2	TRAVEL BLANK	Total/NA	Water	524.2	

GC/MS Semi VOA

Prep Batch: 99014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	
MB 380-99014/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-99014/23-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-99014/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-99014/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-103652-O-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-103673-O-1-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 99120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	99014
MB 380-99014/21-A	Method Blank	Total/NA	Water	525.2	99014
MRL 380-99014/22-A	Lab Control Sample	Total/NA	Water	525.2	99014
380-103652-O-1-A MS	Matrix Spike	Total/NA	Water	525.2	99014
380-103673-O-1-A DU	Duplicate	Total/NA	Water	525.2	99014

Analysis Batch: 99247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 380-99014/23-A	Lab Control Sample	Total/NA	Water	525.2	99014

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QC Association Summary

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

Job ID: 380-103819-1
SDG: Quarterly

GC/MS Semi VOA (Continued)

Analysis Batch: 99247 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 380-99014/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	99014

Prep Batch: 460222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	625.1	
MB 570-460222/1-A	Method Blank	Total/NA	Water	625.1	
LCS 570-460222/2-A	Lab Control Sample	Total/NA	Water	625.1	
LCSD 570-460222/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	

Analysis Batch: 465376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 570-460222/2-A	Lab Control Sample	Total/NA	Water	625.1 SIM	460222
LCSD 570-460222/3-A	Lab Control Sample Dup	Total/NA	Water	625.1 SIM	460222

Analysis Batch: 466731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	625.1	460222
MB 570-460222/1-A	Method Blank	Total/NA	Water	625.1	460222

Analysis Batch: 466820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	625.1 SIM	460222
MB 570-460222/1-A	Method Blank	Total/NA	Water	625.1 SIM	460222

GC VOA

Analysis Batch: 460706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015B GRO LL	
380-103819-2	TRAVEL BLANK	Total/NA	Water	8015B GRO LL	
MB 570-460706/6	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-460706/4	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-460706/5	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	
MRL 570-460706/3	Lab Control Sample	Total/NA	Water	8015B GRO LL	
380-103360-C-3 MS	Matrix Spike	Total/NA	Water	8015B GRO LL	
380-103360-C-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B GRO LL	

GC Semi VOA

Prep Batch: 99012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	505	
MB 380-99012/3-A	Method Blank	Total/NA	Water	505	
LCS 380-99012/31-A	Lab Control Sample	Total/NA	Water	505	
LCSD 380-99012/32-A	Lab Control Sample Dup	Total/NA	Water	505	
MRL 380-99012/1-A	Lab Control Sample	Total/NA	Water	505	
MRL 380-99012/2-A	Lab Control Sample	Total/NA	Water	505	
380-102321-AN-1-A MS	Matrix Spike	Total/NA	Water	505	
380-102321-AP-1-A MS	Matrix Spike	Total/NA	Water	505	
380-102326-AL-1-A MS	Matrix Spike	Total/NA	Water	505	
380-102326-AR-1-A MS	Matrix Spike	Total/NA	Water	505	

QC Association Summary

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

Job ID: 380-103819-1
SDG: Quarterly

GC Semi VOA

Prep Batch: 99690

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	504.1	
MBL 380-99690/4-A	Method Blank	Total/NA	Water	504.1	
LCS 380-99690/29-A	Lab Control Sample	Total/NA	Water	504.1	
MRL 380-99690/2-A	Lab Control Sample	Total/NA	Water	504.1	
MRL 380-99690/3-A	Lab Control Sample	Total/NA	Water	504.1	
380-103787-G-1-A MS	Matrix Spike	Total/NA	Water	504.1	
380-103895-P-1-A DU	Duplicate	Total/NA	Water	504.1	

Analysis Batch: 99738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	505	99012
MB 380-99012/3-A	Method Blank	Total/NA	Water	505	99012
LCS 380-99012/31-A	Lab Control Sample	Total/NA	Water	505	99012
LCSD 380-99012/32-A	Lab Control Sample Dup	Total/NA	Water	505	99012
MRL 380-99012/1-A	Lab Control Sample	Total/NA	Water	505	99012
MRL 380-99012/2-A	Lab Control Sample	Total/NA	Water	505	99012
380-102321-AN-1-A MS	Matrix Spike	Total/NA	Water	505	99012
380-102321-AP-1-A MS	Matrix Spike	Total/NA	Water	505	99012
380-102326-AL-1-A MS	Matrix Spike	Total/NA	Water	505	99012
380-102326-AR-1-A MS	Matrix Spike	Total/NA	Water	505	99012

Analysis Batch: 99836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	504.1	99690
MBL 380-99690/4-A	Method Blank	Total/NA	Water	504.1	99690
LCS 380-99690/29-A	Lab Control Sample	Total/NA	Water	504.1	99690
MRL 380-99690/2-A	Lab Control Sample	Total/NA	Water	504.1	99690
MRL 380-99690/3-A	Lab Control Sample	Total/NA	Water	504.1	99690
380-103787-G-1-A MS	Matrix Spike	Total/NA	Water	504.1	99690
380-103895-P-1-A DU	Duplicate	Total/NA	Water	504.1	99690

Prep Batch: 100477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-2	TRAVEL BLANK	Total/NA	Water	504.1	
MBL 380-100477/4-A	Method Blank	Total/NA	Water	504.1	
LCS 380-100477/29-A	Lab Control Sample	Total/NA	Water	504.1	
MRL 380-100477/2-A	Lab Control Sample	Total/NA	Water	504.1	
MRL 380-100477/3-A	Lab Control Sample	Total/NA	Water	504.1	
380-104963-BU-1-A MS	Matrix Spike	Total/NA	Water	504.1	
380-104963-BV-1-A DU	Duplicate	Total/NA	Water	504.1	

Analysis Batch: 100734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-2	TRAVEL BLANK	Total/NA	Water	504.1	100477
MBL 380-100477/4-A	Method Blank	Total/NA	Water	504.1	100477
LCS 380-100477/29-A	Lab Control Sample	Total/NA	Water	504.1	100477
MRL 380-100477/2-A	Lab Control Sample	Total/NA	Water	504.1	100477
MRL 380-100477/3-A	Lab Control Sample	Total/NA	Water	504.1	100477
380-104963-BU-1-A MS	Matrix Spike	Total/NA	Water	504.1	100477
380-104963-BV-1-A DU	Duplicate	Total/NA	Water	504.1	100477

QC Association Summary

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

Job ID: 380-103819-1
SDG: Quarterly

GC Semi VOA

Analysis Batch: 460498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015B	
MB 570-460498/3	Method Blank	Total/NA	Water	8015B	
LCS 570-460498/4	Lab Control Sample	Total/NA	Water	8015B	
LCSD 570-460498/5	Lab Control Sample Dup	Total/NA	Water	8015B	
MRL 570-460498/6	Lab Control Sample	Total/NA	Water	8015B	
380-103361-AI-1 MS	Matrix Spike	Total/NA	Water	8015B	
380-103361-AI-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	

Prep Batch: 460900

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	3510C	
MB 570-460900/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-460900/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-460900/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MRL 570-460900/4-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 462205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015B	460900
MB 570-460900/1-A	Method Blank	Total/NA	Water	8015B	460900
LCS 570-460900/2-A	Lab Control Sample	Total/NA	Water	8015B	460900
LCSD 570-460900/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	460900
MRL 570-460900/4-A	Lab Control Sample	Total/NA	Water	8015B	460900

HPLC/IC

Analysis Batch: 98834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	300.0	
MB 380-98834/4	Method Blank	Total/NA	Water	300.0	
LCS 380-98834/7	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-98834/8	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-98834/5	Lab Control Sample	Total/NA	Water	300.0	
MRL 380-98834/6	Lab Control Sample	Total/NA	Water	300.0	
380-103820-AT-1 MS	Matrix Spike	Total/NA	Water	300.0	
380-103820-AT-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 98835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	300.0	
MB 380-98835/4	Method Blank	Total/NA	Water	300.0	
LCS 380-98835/7	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-98835/8	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-98835/5	Lab Control Sample	Total/NA	Water	300.0	
MRL 380-98835/6	Lab Control Sample	Total/NA	Water	300.0	
380-103820-AT-1 MS	Matrix Spike	Total/NA	Water	300.0	
380-103820-AT-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 99559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	300.0	

QC Association Summary

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

Job ID: 380-103819-1
SDG: Quarterly

HPLC/IC (Continued)

Analysis Batch: 99559 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 380-99559/8	Method Blank	Total/NA	Water	300.0	
LCS 380-99559/9	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-99559/10	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-99559/11	Lab Control Sample	Total/NA	Water	300.0	
380-103836-C-1 MS	Matrix Spike	Total/NA	Water	300.0	
380-103836-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Analysis Batch: 99151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	200.8	
MBL 380-99151/59	Method Blank	Total/NA	Water	200.8	
LCS 380-99151/61	Lab Control Sample	Total/NA	Water	200.8	
LCSD 380-99151/62	Lab Control Sample Dup	Total/NA	Water	200.8	
LLCS 380-99151/60	Lab Control Sample	Total/NA	Water	200.8	
380-103807-Q-1 MS	Matrix Spike	Total/NA	Water	200.8	
380-103807-Q-1 MSD	Matrix Spike Duplicate	Total/NA	Water	200.8	

Analysis Batch: 99245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	200.7 Rev 4.4	
MB 380-99245/156	Method Blank	Total/NA	Water	200.7 Rev 4.4	
LCS 380-99245/160	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
LCSD 380-99245/161	Lab Control Sample Dup	Total/NA	Water	200.7 Rev 4.4	
LLCS 380-99245/159	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
380-103777-Z-1 MS	Matrix Spike	Total/NA	Water	200.7 Rev 4.4	
380-103777-Z-1 MSD	Matrix Spike Duplicate	Total/NA	Water	200.7 Rev 4.4	

Prep Batch: 106193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	245.1	
MB 810-106193/1-A	Method Blank	Total/NA	Water	245.1	
LCS 810-106193/3-A	Lab Control Sample	Total/NA	Water	245.1	
LLCS 810-106193/2-A	Lab Control Sample	Total/NA	Water	245.1	
810-111329-G-1-E MS	Matrix Spike	Total/NA	Water	245.1	
810-111329-G-1-F MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

Analysis Batch: 106279

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	245.1	106193
MB 810-106193/1-A	Method Blank	Total/NA	Water	245.1	106193
LCS 810-106193/3-A	Lab Control Sample	Total/NA	Water	245.1	106193
LLCS 810-106193/2-A	Lab Control Sample	Total/NA	Water	245.1	106193
810-111329-G-1-E MS	Matrix Spike	Total/NA	Water	245.1	106193
810-111329-G-1-F MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	106193

General Chemistry

Analysis Batch: 98842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	SM 4500 S2 D	

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-103819-1
SDG: Quarterly

General Chemistry (Continued)

Analysis Batch: 98842 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MBL 380-98842/2	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 380-98842/5	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 380-98842/6	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	
MRL 380-98842/3	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
380-103673-I-1 MS	Matrix Spike	Total/NA	Water	SM 4500 S2 D	
380-103673-I-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 99260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	SM 2540C	
MB 380-99260/1	Method Blank	Total/NA	Water	SM 2540C	
HLCS 380-99260/5	Lab Control Sample	Total/NA	Water	SM 2540C	
LCS 380-99260/4	Lab Control Sample	Total/NA	Water	SM 2540C	
MRL 380-99260/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MRL 380-99260/3	Lab Control Sample	Total/NA	Water	SM 2540C	
380-103808-I-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 99786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	SM 2320B	
MB 380-99786/1	Method Blank	Total/NA	Water	SM 2320B	
LCS 380-99786/3	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 380-99786/18	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
LLCS 380-99786/4	Lab Control Sample	Total/NA	Water	SM 2320B	
MRL 380-99786/2	Lab Control Sample	Total/NA	Water	SM 2320B	
380-103777-Y-1 MS	Matrix Spike	Total/NA	Water	SM 2320B	
380-103777-Y-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 2320B	
380-103777-Y-1 DU	Duplicate	Total/NA	Water	SM 2320B	

Analysis Batch: 99789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	SM 2510B	
MB 380-99789/2	Method Blank	Total/NA	Water	SM 2510B	
LCS 380-99789/4	Lab Control Sample	Total/NA	Water	SM 2510B	
LCSD 380-99789/16	Lab Control Sample Dup	Total/NA	Water	SM 2510B	
MRL 380-99789/3	Lab Control Sample	Total/NA	Water	SM 2510B	
380-103777-Y-1 DU	Duplicate	Total/NA	Water	SM 2510B	

Analysis Batch: 99791

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	SM 4500 H+ B	
MB 380-99791/4	Method Blank	Total/NA	Water	SM 4500 H+ B	
LCS 380-99791/5	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
LCSD 380-99791/17	Lab Control Sample Dup	Total/NA	Water	SM 4500 H+ B	
380-103777-Y-1 DU	Duplicate	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 100089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-103819-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	SM 4500 F C	
MB 380-100089/40	Method Blank	Total/NA	Water	SM 4500 F C	
MB 380-100089/6	Method Blank	Total/NA	Water	SM 4500 F C	

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-103819-1
SDG: Quarterly

General Chemistry (Continued)

Analysis Batch: 100089 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 380-100089/42	Lab Control Sample	Total/NA	Water	SM 4500 F C	
LCSD 380-100089/43	Lab Control Sample Dup	Total/NA	Water	SM 4500 F C	
MRL 380-100089/41	Lab Control Sample	Total/NA	Water	SM 4500 F C	
MRL 380-100089/7	Lab Control Sample	Total/NA	Water	SM 4500 F C	
380-103819-1 MS	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	SM 4500 F C	
380-103819-1 MSD	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	SM 4500 F C	

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Lab Chronicle

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

Job ID: 380-103819-1
SDG: Quarterly

Client Sample ID: AIEA GULCH WELLS PUMP 2
Date Collected: 07/11/24 10:03
Date Received: 07/12/24 10:18

Lab Sample ID: 380-103819-1
Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	99491	P3EE	EA POM	07/17/24 19:20
Total/NA	Analysis	524.2		1	99547	P3EE	EA POM	07/18/24 12:36
Total/NA	Analysis	524.2		1	99754	YXX2	EA POM	07/18/24 12:36
Total/NA	Prep	525.2			99014	OTM3	EA POM	07/15/24 12:15
Total/NA	Analysis	525.2		1	99120	Q8LA	EA POM	07/16/24 17:48
Total/NA	Prep	625.1			460222	H1SH	EET CAL 4	07/15/24 05:12
Total/NA	Analysis	625.1		1	466731	CG	EET CAL 4	08/02/24 20:53
Total/NA	Prep	625.1			460222	H1SH	EET CAL 4	07/15/24 05:12
Total/NA	Analysis	625.1 SIM		1	466820	PQS1	EET CAL 4	08/02/24 13:47
Total/NA	Analysis	8015B GRO LL		1	460706	A9VE	EET CAL 4	07/17/24 00:28
Total/NA	Prep	504.1			99690	LZ8Q	EA POM	07/18/24 15:00 - 07/18/24 16:00 ¹
Total/NA	Analysis	504.1		1	99836	LZ8Q	EA POM	07/18/24 23:48
Total/NA	Prep	505			99012	K9GY	EA POM	07/16/24 14:20 - 07/16/24 16:00 ¹
Total/NA	Analysis	505		1	99738	ULRL	EA POM	07/17/24 00:43
Total/NA	Prep	3510C			460900	H6FE	EET CAL 4	07/16/24 16:05
Total/NA	Analysis	8015B		1	462205	SP9M	EET CAL 4	07/20/24 15:15
Total/NA	Analysis	8015B		1	460498	ZE2W	EET CAL 4	07/15/24 21:02
Total/NA	Analysis	300.0		1	99559	UNJR	EA POM	07/18/24 04:18
Total/NA	Analysis	300.0		5	98834	BG6L	EA POM	07/12/24 19:58
Total/NA	Analysis	300.0		5	98835	BG6L	EA POM	07/12/24 19:58
Total/NA	Analysis	200.7 Rev 4.4		1	99245	T8RV	EA POM	07/15/24 23:52
Total/NA	Analysis	200.8		1	99151	VB9B	EA POM	07/15/24 16:40
Total/NA	Prep	245.1			106193	AC	EA SB	07/17/24 12:24
Total/NA	Analysis	245.1		1	106279	AC	EA SB	07/17/24 18:39
Total/NA	Analysis	SM 2320B		1	99786	GP4S	EA POM	07/18/24 19:02
Total/NA	Analysis	SM 2510B		1	99789	GP4S	EA POM	07/18/24 19:02
Total/NA	Analysis	SM 2540C		1	99260	UJRF	EA POM	07/16/24 15:19
Total/NA	Analysis	SM 4500 F C		1	100089	GP4S	EA POM	07/19/24 17:17
Total/NA	Analysis	SM 4500 H+ B		1	99791	GP4S	EA POM	07/18/24 19:02
Total/NA	Analysis	SM 4500 S2 D		1	98842	MQP5	EA POM	07/12/24 15:49

Client Sample ID: TRAVEL BLANK
Date Collected: 07/11/24 10:03
Date Received: 07/12/24 10:18

Lab Sample ID: 380-103819-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	99491	P3EE	EA POM	07/17/24 19:42
Total/NA	Analysis	524.2		1	99547	P3EE	EA POM	07/18/24 13:00
Total/NA	Analysis	524.2		1	99754	YXX2	EA POM	07/18/24 13:00
Total/NA	Analysis	8015B GRO LL		1	460706	A9VE	EET CAL 4	07/16/24 23:10
Total/NA	Prep	504.1			100477	LZ8Q	EA POM	07/24/24 12:00 - 07/24/24 13:00 ¹
Total/NA	Analysis	504.1		1	100734	LZ8Q	EA POM	07/25/24 00:46

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Lab Chronicle

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

Job ID: 380-103819-1
SDG: Quarterly

Laboratory References:

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

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

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

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Accreditation/Certification Summary

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

Job ID: 380-103819-1
 SDG: Quarterly

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
505	505	Drinking Water	Polychlorinated biphenyls, Total
524.2		Drinking Water	1,3-Dichloropropene, Total
524.2		Drinking Water	2-Butanone (MEK)
524.2		Drinking Water	Acetone
524.2		Drinking Water	Bromodichloromethane
524.2		Drinking Water	Bromoethane
524.2		Drinking Water	Bromoform
524.2		Drinking Water	Chlorodibromomethane
524.2		Drinking Water	Chloroform (Trichloromethane)
524.2		Drinking Water	m,p Xylenes
524.2		Drinking Water	o-Xylene
524.2		Water	1,3-Dichloropropene, Total
524.2		Water	2-Butanone (MEK)
524.2		Water	Acetone
524.2		Water	Bromodichloromethane
524.2		Water	Bromoethane
524.2		Water	Bromoform
524.2		Water	Chlorodibromomethane
524.2		Water	Chloroform (Trichloromethane)
524.2		Water	m,p-Xylenes
524.2		Water	o-Xylene
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

Accreditation/Certification Summary

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

Job ID: 380-103819-1
 SDG: Quarterly

Laboratory: Eurofins Eaton Analytical Pomona (Continued)

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

Authority	Program	Identification Number	Expiration Date
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	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	Terbutylazine
525.2	525.2	Drinking Water	Total Permethrin (mixed isomers)
525.2	525.2	Drinking Water	trans-Nonachlor
SM 2320B		Drinking Water	Bicarbonate Alkalinity as CaCO3
SM 2320B		Drinking Water	Carbonate Alkalinity as CaCO3
SM 4500 S2 D		Drinking Water	Sulfide

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	State	3082	07-31-26
Kansas	NELAP	E-10420	07-31-25
Nevada	State	CA00111	10-31-24
Oregon	NELAP	4175	02-02-25
USDA	US Federal Programs	P330-22-00059	06-08-26
Washington	State	C916-18	10-11-24

Laboratory: Eurofins Eaton Analytical South Bend

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

Authority	Program	Identification Number	Expiration Date
A2LA	ISO/IEC 17025	5794.01	07-21-24
Alabama	State	40700	06-30-25
Alaska	State	IN00035	06-30-25
Arizona	State	AZ0432	07-25-24
Arkansas (DW)	State	EPA IN00035	06-30-25
California	State	2920	06-30-24 *
Colorado	State	IN00035	02-28-25
Connecticut	State	PH-0132	03-31-26
Delaware (DW)	State	IN00035	06-30-25
Florida	NELAP	E87775	06-30-25
Georgia (DW)	State	929	06-30-24 *
Hawaii	State	IN035	06-30-25
Idaho (DW)	State	IN00035	12-31-24
IL Dept. of Public Health (Micro)	State	17767	06-30-25
Illinois	NELAP	200001	09-19-24
Indiana	State	C-71-01	12-31-25

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

Accreditation/Certification Summary

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

Job ID: 380-103819-1
 SDG: Quarterly

Laboratory: Eurofins Eaton Analytical South Bend (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
Indiana (Micro)	State	M-76-07	12-31-25
Iowa	State	IA Lab #098	08-01-24
Kansas	NELAP	E-10233	10-31-24
Kentucky (DW)	State	KY90056	12-31-24
Louisiana (DW)	State	LA014	12-31-24
Maine	State	IN00035	05-01-25
Maryland	State	209	06-30-25
Massachusetts	State	M-IN035	07-30-24
MI - RadChem Recognition	State	9926	03-22-25
Michigan	State	9926	03-22-25
Minnesota	NELAP	1989807	12-31-24
Mississippi	State	IN00035	06-30-25
Missouri	State	880	09-30-24
Montana (DW)	State	CERT0026	01-01-25
Nebraska	State	NE-OS-05-04	06-30-25
Nevada	State	IN000352024-01	07-31-24
New Hampshire	NELAP	2124	11-05-24
New Jersey	NELAP	IN598	06-30-25
New Mexico	State	IN00035	06-30-25
New York	NELAP	11398	04-01-25
North Carolina (DW)	State	18700	07-31-24
North Dakota	State	R-035	06-30-24 *
Northern Mariana Islands (DW)	State	IN00035	06-30-25
Ohio	State	87775	06-30-25
Oklahoma	NELAP	D9508	08-31-24
Oregon	NELAP	4156	09-16-24
Pennsylvania	NELAP	68-00466	04-30-25
Puerto Rico	State	IN00035	04-01-25
Rhode Island	State	LAO00343	07-21-24
South Carolina	State	95005001	06-30-24 *
South Dakota (DW)	State	IN00035	06-30-25
Tennessee	State	TN02973	06-30-25
Texas	NELAP	T104704187-22-16	12-31-24
Texas	TCEQ Water Supply	TX207	06-30-25
USEPA Reg X SDWA	US Federal Programs	IN00035	08-24-24
USEPA UCMR 5	US Federal Programs	IN00035	12-31-25
Utah	NELAP	IN00035	07-31-24
Vermont	State	VT-8775	08-01-24
Virginia	NELAP	460275	03-14-25
Washington	State	C837	01-01-25
West Virginia (DW)	State	9927 C	01-31-25
Wisconsin	State	999766900	08-31-24
Wisconsin (Micro)	State	10121	12-31-24
Wyoming	State	8TMS-L	06-30-25

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

Method Summary

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

Job ID: 380-103819-1
SDG: Quarterly

Method	Method Description	Protocol	Laboratory
524.2	Total Trihalomethanes	EPA-DW	EA POM
524.2	Volatile Organic Compounds (GC/MS SIM)	EPA-DW	EA POM
524.2	Volatile Organic Compounds (GC/MS)	EPA-DW	EA POM
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
504.1	EDB, DBCP and 1,2,3-TCP (GC)	EPA-DW2	EA POM
505	Organochlorine Pesticides/PCBs (GC)	EPA	EA POM
8015B	Diesel Range Organics (DRO) (GC) Low Level	SW846	EET CAL 4
8015B	Nonhalogenated Organic Compounds - Direct Injection (GC)	SW846	EET CAL 4
300.0	Anions, Ion Chromatography	EPA	EA POM
200.7 Rev 4.4	Metals (ICP)	EPA	EA POM
200.8	Metals (ICP/MS)	EPA	EA POM
245.1	Mercury (CVAA)	EPA	EA SB
SM 2320B	Alkalinity	SM	EA POM
SM 2510B	Conductivity, Specific Conductance	SM	EA POM
SM 2540C	Solids, Total Dissolved (TDS)	SM	EA POM
SM 4500 F C	Fluoride	SM	EA POM
SM 4500 H+ B	pH	SM	EA POM
SM 4500 S2 D	Sulfide, Total	SM	EA POM
245.1	Preparation, Mercury	EPA	EA SB
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAL 4
5030C	Purge and Trap	SW846	EET CAL 4
504.1	Microextraction	EPA-DW	EA POM
505	Extraction, Organochlorine Pesticides/PCBs	EPA	EA POM
525.2	Extraction of Semivolatile Compounds	EPA	EA POM
625.1	Liquid-Liquid Extraction	40CFR136A	EET CAL 4
None	Autocomplete Prep - Metals - No Digestion required	None	EA POM

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

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

EPA-DW2 = "Methods For The Determination of Organic Compounds in Drinking Water - Supplement III ", EPA/600/R-95-131, August 1995

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

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: 380-103819-1
SDG: Quarterly

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-103819-1	AIEA GULCH WELLS PUMP 2	Drinking Water	07/11/24 10:03	07/12/24 10:18
380-103819-2	TRAVEL BLANK	Water	07/11/24 10:03	07/12/24 10:18

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

Chain of Custody Record



Client Information Client Contact: Dr Ron Fenstermacher Company: Rachelle Arada@eurofins.com City & County of Honolulu		Lab PM: Arada Rachelle E-Mail: Rachelle.Arada@eurofins.com		Carrier Tracking No(s): State of Origin:		COC No: Page: Page 1 of 2 Job #:			
Due Date Requested: TAT Requested (days): Compliance Project: Δ No PO #: C20525101 exp 05312023 WO #: 36001111 Project #: RED-HILL SSO#:		Analysis Requested 504 I.PREC 505 LL.PREC 525 2.PREC 525plus PLUS TICs 5M4500_S2_D Sulfide Total 245C_Caled Total dissolved Solids (TDS) 2007 200 8 23209 2510B SM4500_H+ 2451 Local Method 4500 F.C 300 OF_28D_B 300_OF_28D_PREC 300_OF_48H_PREC SUBCONTRACT 625 PAH Physis LL (EAL) + TICs SUBCONTRACT 625 Base Neutral LL (EAL) Physis SUBCONTRACT 625 Acid LL (EAL) Physis 8015B_GRO_LL (MOD) GRO Total Number of containers		Preservation Codes: A HCL B NaOH C Zn Acetate D Nitric Acid E NaHSO4 F MeOH G Amchlor H Ascorbic Acid I Ice J DI Water K EDTA L EDA Other:		Preservation Codes: M Hexane N None O A3NaO2 P Na2O4S Q Na2SO3 R Na2SO4 S H2SO4 T TSP Dodecylhydrate U Acetone V MCAA W pH 4-5 Y Trizma Z other (specify)		Special Instructions/Note: 380-103819 COC	
Sample Identification Area Guich Wells Pump 2 Travel Blank		Sample Date: 11 Jul 2024 Sample Time: 1003 Sample Time: 11-Jul-2024 1003		Sample Type (C=Comp, G=grab): G Matrix (Water, Swast, Condensate, BT-Tissue, Final): Water		Field Filtered Sample (Yes or No): Perform MS/MSD (Yes or No): 504 I.PREC 505 LL.PREC 525 2.PREC 525plus PLUS TICs 5M4500_S2_D Sulfide Total 245C_Caled Total dissolved Solids (TDS) 2007 200 8 23209 2510B SM4500_H+ 2451 Local Method 4500 F.C 300 OF_28D_B 300_OF_28D_PREC 300_OF_48H_PREC SUBCONTRACT 625 PAH Physis LL (EAL) + TICs SUBCONTRACT 625 Base Neutral LL (EAL) Physis SUBCONTRACT 625 Acid LL (EAL) Physis 8015B_GRO_LL (MOD) GRO Total Number of containers			
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested I II III IV Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For		Months: 4784 4784 4784 4784			
Empty Kit Relinquished by:		Date: 11 July 2024		Method of St. primnt: FED EX		Date/Time: 07/12/2024 10:18 Date/Time:			
Relinquished by:		Date/Time: 11 July 2024		Received by: GRETNER		Date/Time: 07/12/2024 10:18 Date/Time:			
Relinquished by:		Date/Time:		Received by:		Date/Time:			
Relinquished by:		Date/Time:		Received by:		Date/Time:			
Custody Seals Intact: Δ Yes Δ No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks: 15.1A 02.01.11 02.50 01.22 40 01.33 34.0 1.33 30.0		Date/Time: 07/12/2024 10:18 Date/Time:			



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-103819-1

SDG Number: Quarterly

Login Number: 103819

List Number: 1

Creator: Edrosa, Rey

List Source: Eurofins Eaton Analytical Pomona

Question	Answer	Comment
The coolers custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler(s) Temperature is acceptable.	True	
Cooler(s) Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and is legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	Refer to NCM for affected item(s).
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	
CIO4 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: 380-103819-1

SDG Number: Quarterly

Login Number: 103819

List Number: 2

Creator: Nguyen, Jenny

List Source: Eurofins Calscience

List Creation: 07/13/24 03:45 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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	5.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-103819-1

SDG Number: Quarterly

Login Number: 103819

List Number: 3

Creator: Pehling-Wright, Penny

List Source: Eurofins Eaton Analytical South Bend

List Creation: 07/16/24 01:05 PM

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

