

# ANALYTICAL REPORT

## PREPARED FOR

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## JOB DESCRIPTION

RED-HILL  
Quarterly - Aiea Gulch Wells P2

## JOB NUMBER

380-115709-1

# Eurofins Eaton Analytical Pomona

## Job Notes

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

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

## Compliance Statement

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

## Authorization



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# Definitions/Glossary

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
^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 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/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC 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
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
^5+	Linear Range Check (LRC) is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### General Chemistry

Qualifier	Qualifier Description
^2	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
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.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)

# Definitions/Glossary

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

## Glossary (Continued)

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

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

# Case Narrative

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

Job ID: 380-115709-1

**Job ID: 380-115709-1**

**Eurofins Eaton Analytical Pomona**

## Job Narrative 380-115709-1

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

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

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

### Receipt

The samples were received on 10/2/2024 10:20 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 3.2°C, 4.0°C and 5.2°C.

### 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 570-487444 and analytical batch 570-487832 recovered outside control limits for the following analyte(s): Benzidine. Benzidine has 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 570-487444 and analytical batch 570-487832 recovered outside control limits for the following analytes: Benzidine.

Method 625.1\_SIM: The matrix spike/matrix spike duplicate (MS/MSD) for preparation batch 570-487444 and analytical batch 570-488403 exceeded control limits for the following analyte(s): Benzidine, Note that this analyte is a known poor performer when analyzed using this method.

Method 525.2\_PREC: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 380-111994 and analytical batch 380-112094 were below control limits for Anthracene . See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

### Gasoline Range Organics

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

### Diesel Range Organics

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

### 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

Method 300\_OF\_48H\_PREC: The following sample was diluted for Nitrite as N to prevent detector saturation due to high

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# Case Narrative

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

Job ID: 380-115709-1

## Job ID: 380-115709-1 (Continued)

## Eurofins Eaton Analytical Pomona

conductivity: AIEA GULCH WELLS PUMP 2 (331-202-TP072) (380-115709-1). Elevated reporting limits (RLs) are provided.

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

### Metals

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

### General Chemistry

Method 2510B: The method blank for analytical batch 380-111944 contained Specific Conductance more than half the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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



# Detection Summary

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

Job ID: 380-115709-1  
 SDG: Quarterly - Aiea Gulch Wells P2

**Client Sample ID: AIEA GULCH WELLS PUMP 2  
 (331-202-TP072)**

**Lab Sample ID: 380-115709-1**

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Bromide	180		5.0	ug/L	1		300.0	Total/NA
Chloride	96		2.5	mg/L	5		300.0	Total/NA
Nitrate as N	0.53		0.25	mg/L	5		300.0	Total/NA
Sulfate	13		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	2.6	^5+	1.0	mg/L	1		200.7 Rev 4.4	Total/NA
Sodium	35		1.0	mg/L	1		200.7 Rev 4.4	Total/NA
Chromium	1.7		1.0	ug/L	1		200.8	Total Recoverable
Copper	2.2		2.0	ug/L	1		200.8	Total Recoverable
Alkalinity	53		2.0	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	53		2.0	mg/L	1		SM 2320B	Total/NA
Specific Conductance	460	^2	2.0	umhos/cm	1		SM 2510B	Total/NA
Total Dissolved Solids	310		20	mg/L	1		SM 2540C	Total/NA
pH	7.8	HF		SU	1		SM 4500 H+ B	Total/NA

**Client Sample ID: TRAVEL BLANK**

**Lab Sample ID: 380-115709-2**

No Detections.

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

**Client Sample ID: AIEA GULCH WELLS PUMP 2  
(331-202-TP072)**

**Lab Sample ID: 380-115709-1**

Date Collected: 10/01/24 10:46

Matrix: Drinking Water

Date Received: 10/02/24 10:20

**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			10/05/24 03:22	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			10/07/24 18:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		70 - 130		10/07/24 18:18	1
4-Bromofluorobenzene (Surr)	105		70 - 130		10/07/24 18:18	1
1,2-Dichloroethane-d4 (Surr)	99		70 - 130		10/07/24 18:18	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			10/05/24 03:22	1
1,1,1-Trichloroethane	<0.50		0.50	ug/L			10/05/24 03:22	1
1,1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L			10/05/24 03:22	1
1,1,2-Trichloroethane	<0.50		0.50	ug/L			10/05/24 03:22	1
1,1-Dichloroethylene	<0.50		0.50	ug/L			10/05/24 03:22	1
1,1-Dichloroethane	<0.50		0.50	ug/L			10/05/24 03:22	1
1,1-Dichloropropene	<0.50		0.50	ug/L			10/05/24 03:22	1
1,2,3-Trichlorobenzene	<0.50	^3+	0.50	ug/L			10/05/24 03:22	1
1,2,3-Trichloropropane	<0.50		0.50	ug/L			10/05/24 03:22	1
1,2,4-Trichlorobenzene	<0.50	^3+	0.50	ug/L			10/05/24 03:22	1
1,2,4-Trimethylbenzene	<0.50		0.50	ug/L			10/05/24 03:22	1
1,2-Dichloroethane	<0.50		0.50	ug/L			10/05/24 03:22	1
1,2-Dichloropropane	<0.50		0.50	ug/L			10/05/24 03:22	1
1,3,5-Trimethylbenzene	<0.50		0.50	ug/L			10/05/24 03:22	1
1,3-Dichloropropane	<0.50		0.50	ug/L			10/05/24 03:22	1
1,3-Dichloropropene, Total	<0.50		0.50	ug/L			10/05/24 03:22	1
2,2-Dichloropropane	<0.50		0.50	ug/L			10/05/24 03:22	1
2-Butanone (MEK)	<5.0		5.0	ug/L			10/05/24 03:22	1
4-Methyl-2-pentanone (MIBK)	<5.0		5.0	ug/L			10/05/24 03:22	1
Acetone	<500		500	ug/L			10/05/24 03:22	1
Benzene	<0.50		0.50	ug/L			10/05/24 03:22	1
Bromobenzene	<0.50		0.50	ug/L			10/05/24 03:22	1
Bromochloromethane	<0.50		0.50	ug/L			10/05/24 03:22	1
Bromodichloromethane	<0.50		0.50	ug/L			10/05/24 03:22	1
Bromoethane	<0.50		0.50	ug/L			10/05/24 03:22	1
Bromoform	<0.50		0.50	ug/L			10/05/24 03:22	1
Bromomethane (Methyl Bromide)	<0.50		0.50	ug/L			10/05/24 03:22	1
Carbon disulfide	<0.50		0.50	ug/L			10/05/24 03:22	1
Carbon tetrachloride	<0.50		0.50	ug/L			10/05/24 03:22	1
Chlorobenzene	<0.50		0.50	ug/L			10/05/24 03:22	1
Chlorodibromomethane	<0.50		0.50	ug/L			10/05/24 03:22	1
Chloroethane	<0.50		0.50	ug/L			10/05/24 03:22	1
Chloroform (Trichloromethane)	<0.50		0.50	ug/L			10/05/24 03:22	1
Chloromethane (methyl chloride)	<0.50	^3+	0.50	ug/L			10/05/24 03:22	1
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L			10/05/24 03:22	1
cis-1,3-Dichloropropene	<0.50		0.50	ug/L			10/05/24 03:22	1

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# Client Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

**Client Sample ID: AIEA GULCH WELLS PUMP 2  
(331-202-TP072)**

**Lab Sample ID: 380-115709-1**

**Date Collected: 10/01/24 10:46**

**Matrix: Drinking Water**

**Date Received: 10/02/24 10:20**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	<0.50		0.50	ug/L			10/05/24 03:22	1
Dichlorodifluoromethane	<0.50		0.50	ug/L			10/05/24 03:22	1
Dichloromethane	<0.50		0.50	ug/L			10/05/24 03:22	1
Diisopropyl ether	<3.0		3.0	ug/L			10/05/24 03:22	1
Ethylbenzene	<0.50		0.50	ug/L			10/05/24 03:22	1
Hexachlorobutadiene	<0.50	^3+ **	0.50	ug/L			10/05/24 03:22	1
Isopropylbenzene	<0.50		0.50	ug/L			10/05/24 03:22	1
m,p-Xylenes	<0.50		0.50	ug/L			10/05/24 03:22	1
m-Dichlorobenzene (1,3-DCB)	<0.50		0.50	ug/L			10/05/24 03:22	1
Methyl-tert-butyl Ether (MTBE)	<0.50		0.50	ug/L			10/05/24 03:22	1
Naphthalene	<0.50	^3+	0.50	ug/L			10/05/24 03:22	1
n-Butylbenzene	<0.50		0.50	ug/L			10/05/24 03:22	1
N-Propylbenzene	<0.50		0.50	ug/L			10/05/24 03:22	1
o-Chlorotoluene	<0.50		0.50	ug/L			10/05/24 03:22	1
o-Dichlorobenzene (1,2-DCB)	<0.50		0.50	ug/L			10/05/24 03:22	1
o-Xylene	<0.50		0.50	ug/L			10/05/24 03:22	1
p-Chlorotoluene	<0.50		0.50	ug/L			10/05/24 03:22	1
p-Dichlorobenzene (1,4-DCB)	<0.50		0.50	ug/L			10/05/24 03:22	1
p-Isopropyltoluene	<0.50	^3+	0.50	ug/L			10/05/24 03:22	1
sec-Butylbenzene	<0.50	^3+	0.50	ug/L			10/05/24 03:22	1
Styrene	<0.50		0.50	ug/L			10/05/24 03:22	1
Tert-amyl methyl ether	<3.0		3.0	ug/L			10/05/24 03:22	1
Tert-butyl ethyl ether	<3.0		3.0	ug/L			10/05/24 03:22	1
tert-Butylbenzene	<0.50	^3+	0.50	ug/L			10/05/24 03:22	1
Tetrachloroethene (PCE)	<0.50		0.50	ug/L			10/05/24 03:22	1
Toluene	<0.50		0.50	ug/L			10/05/24 03:22	1
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L			10/05/24 03:22	1
trans-1,3-Dichloropropene	<0.50		0.50	ug/L			10/05/24 03:22	1
Trichloroethylene (TCE)	<0.50		0.50	ug/L			10/05/24 03:22	1
Trichlorofluoromethane (Freon 11)	<0.50		0.50	ug/L			10/05/24 03:22	1
Trichlorotrifluoroethane	<0.50		0.50	ug/L			10/05/24 03:22	1
Vinyl Chloride (VC)	<0.30		0.30	ug/L			10/05/24 03:22	1
Xylenes, Total	<0.50		0.50	ug/L			10/05/24 03:22	1

<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>
1-Hexanol, 2-ethyl-	0.60	T J N	ug/L		11.98	104-76-7		10/05/24 03:22	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)	99		70 - 130		10/05/24 03:22	1
4-Bromofluorobenzene (Surr)	103		70 - 130		10/05/24 03:22	1
Toluene-d8 (Surr)	97		70 - 130		10/05/24 03:22	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
2,4'-DDE	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
2,4'-DDT	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
2,4-Dinitrotoluene	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
2,6-Dinitrotoluene	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1

Eurofins Eaton Analytical Pomona

# Client Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

**Client Sample ID: AIEA GULCH WELLS PUMP 2  
(331-202-TP072)**

**Lab Sample ID: 380-115709-1**

**Date Collected: 10/01/24 10:46**

**Matrix: Drinking Water**

**Date Received: 10/02/24 10:20**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
4,4'-DDE	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
4,4'-DDT	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Acenaphthene	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Acenaphthylene	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Acetochlor	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Alachlor	<0.049		0.049	ug/L		10/06/24 12:09	10/07/24 17:02	1
alpha-BHC	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
alpha-Chlordane	<0.049		0.049	ug/L		10/06/24 12:09	10/07/24 17:02	1
Anthracene	<0.019	F1	0.019	ug/L		10/06/24 12:09	10/07/24 17:02	1
Atrazine	<0.049		0.049	ug/L		10/06/24 12:09	10/07/24 17:02	1
Benz(a)anthracene	<0.049		0.049	ug/L		10/06/24 12:09	10/07/24 17:02	1
Benzo[a]pyrene	<0.019		0.019	ug/L		10/06/24 12:09	10/07/24 17:02	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		10/06/24 12:09	10/07/24 17:02	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		10/06/24 12:09	10/07/24 17:02	1
Benzo[k]fluoranthene	<0.019		0.019	ug/L		10/06/24 12:09	10/07/24 17:02	1
beta-BHC	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		10/06/24 12:09	10/07/24 17:02	1
Aldrin	<0.0097		0.0097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Bromacil	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Butachlor	<0.049		0.049	ug/L		10/06/24 12:09	10/07/24 17:02	1
Butylbenzylphthalate	<0.49		0.49	ug/L		10/06/24 12:09	10/07/24 17:02	1
Chlorobenzilate	<0.097	*1	0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Chloroneb	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Chlorpyrifos	<0.049		0.049	ug/L		10/06/24 12:09	10/07/24 17:02	1
Chrysene	<0.019		0.019	ug/L		10/06/24 12:09	10/07/24 17:02	1
delta-BHC	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Di(2-ethylhexyl)adipate	<0.58	*1	0.58	ug/L		10/06/24 12:09	10/07/24 17:02	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		10/06/24 12:09	10/07/24 17:02	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		10/06/24 12:09	10/07/24 17:02	1
Dieldrin	<0.0097		0.0097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Diethylphthalate	<0.49		0.49	ug/L		10/06/24 12:09	10/07/24 17:02	1
Dimethylphthalate	<0.49		0.49	ug/L		10/06/24 12:09	10/07/24 17:02	1
Di-n-butyl phthalate	<0.97		0.97	ug/L		10/06/24 12:09	10/07/24 17:02	1
Di-n-octyl phthalate	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Endosulfan I (Alpha)	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Endosulfan II (Beta)	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Endosulfan sulfate	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Endrin	<0.0097		0.0097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Endrin aldehyde	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
EPTC	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Fluoranthene	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Fluorene	<0.049		0.049	ug/L		10/06/24 12:09	10/07/24 17:02	1
gamma-BHC (Lindane)	<0.0097		0.0097	ug/L		10/06/24 12:09	10/07/24 17:02	1
gamma-Chlordane	<0.049		0.049	ug/L		10/06/24 12:09	10/07/24 17:02	1
Heptachlor	<0.0097		0.0097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Heptachlor epoxide (isomer B)	<0.0097		0.0097	ug/L		10/06/24 12:09	10/07/24 17:02	1

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# Client Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

**Client Sample ID: AIEA GULCH WELLS PUMP 2  
(331-202-TP072)**

**Lab Sample ID: 380-115709-1**

**Date Collected: 10/01/24 10:46**

**Matrix: Drinking Water**

**Date Received: 10/02/24 10:20**

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	<0.049		0.049	ug/L		10/06/24 12:09	10/07/24 17:02	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		10/06/24 12:09	10/07/24 17:02	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		10/06/24 12:09	10/07/24 17:02	1
Isophorone	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Malathion	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Methoxychlor	<0.049	*1	0.049	ug/L		10/06/24 12:09	10/07/24 17:02	1
Metolachlor	<0.049		0.049	ug/L		10/06/24 12:09	10/07/24 17:02	1
Molinate	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Naphthalene	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Parathion	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Pendimethalin (Penoxaline)	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Phenanthrene	<0.039		0.039	ug/L		10/06/24 12:09	10/07/24 17:02	1
Propachlor	<0.049		0.049	ug/L		10/06/24 12:09	10/07/24 17:02	1
Pyrene	<0.049		0.049	ug/L		10/06/24 12:09	10/07/24 17:02	1
Simazine	<0.049		0.049	ug/L		10/06/24 12:09	10/07/24 17:02	1
Terbacil	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Terbutylazine	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Thiobencarb	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		10/06/24 12:09	10/07/24 17:02	1
trans-Nonachlor	<0.049		0.049	ug/L		10/06/24 12:09	10/07/24 17:02	1
Trifluralin	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
1-Methylnaphthalene	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1
2-Methylnaphthalene	<0.097		0.097	ug/L		10/06/24 12:09	10/07/24 17:02	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	10/06/24 12:09	10/07/24 17:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	96		70 - 130	10/06/24 12:09	10/07/24 17:02	1
Perylene-d12	85		70 - 130	10/06/24 12:09	10/07/24 17:02	1
Triphenylphosphate	98		70 - 130	10/06/24 12:09	10/07/24 17:02	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		10/04/24 05:24	10/06/24 15:11	1
2,4,5-Trichlorophenol	<4.9		4.9	ug/L		10/04/24 05:24	10/06/24 15:11	1
2,4,6-Trichlorophenol	<0.97		0.97	ug/L		10/04/24 05:24	10/06/24 15:11	1
2,4-Dichlorophenol	<0.97		0.97	ug/L		10/04/24 05:24	10/06/24 15:11	1
2,4-Dinitrophenol	<4.9		4.9	ug/L		10/04/24 05:24	10/06/24 15:11	1
2,6-Dichlorophenol	<4.9		4.9	ug/L		10/04/24 05:24	10/06/24 15:11	1
2-Chloronaphthalene	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
2-Chlorophenol	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
2-Methylnaphthalene	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
2-Methylphenol	<0.97		0.97	ug/L		10/04/24 05:24	10/06/24 15:11	1
2-Nitroaniline	<4.9		4.9	ug/L		10/04/24 05:24	10/06/24 15:11	1
2-Nitrophenol	<4.9		4.9	ug/L		10/04/24 05:24	10/06/24 15:11	1
3/4-Methylphenol	<1.9		1.9	ug/L		10/04/24 05:24	10/06/24 15:11	1
3-Nitroaniline	<4.9		4.9	ug/L		10/04/24 05:24	10/06/24 15:11	1
4,6-Dinitro-2-methylphenol	<4.9		4.9	ug/L		10/04/24 05:24	10/06/24 15:11	1

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# Client Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

**Client Sample ID: AIEA GULCH WELLS PUMP 2  
(331-202-TP072)**

**Lab Sample ID: 380-115709-1**

Date Collected: 10/01/24 10:46

Matrix: Drinking Water

Date Received: 10/02/24 10:20

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
4-Chloro-3-methylphenol	<0.97		0.97	ug/L		10/04/24 05:24	10/06/24 15:11	1
4-Chloroaniline	<4.9		4.9	ug/L		10/04/24 05:24	10/06/24 15:11	1
4-Chlorophenyl phenyl ether	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
4-Nitroaniline	<4.9		4.9	ug/L		10/04/24 05:24	10/06/24 15:11	1
4-Nitrophenol	<4.9		4.9	ug/L		10/04/24 05:24	10/06/24 15:11	1
Acenaphthene	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Acenaphthylene	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Aniline	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Anthracene	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Benzidine	<4.9	*1 *	4.9	ug/L		10/04/24 05:24	10/06/24 15:11	1
Benzo[a]anthracene	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Benzo[a]pyrene	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Benzo[b]fluoranthene	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Benzo[g,h,i]perylene	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Benzo[k]fluoranthene	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Benzoic acid	<9.7		9.7	ug/L		10/04/24 05:24	10/06/24 15:11	1
Benzyl alcohol	<0.97		0.97	ug/L		10/04/24 05:24	10/06/24 15:11	1
Bis(2-chloroethoxy)methane	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Bis(2-chloroethyl)ether	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
bis (2-Chloroisopropyl) ether	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Chrysene	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Dibenz(a,h)anthracene	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Dibenzofuran	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Fluoranthene	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Fluorene	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Hexachloroethane	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Naphthalene	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Nitrobenzene	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
N-Nitrosodi-n-propylamine	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
N-Nitrosodiphenylamine	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Pentachlorophenol	<0.97		0.97	ug/L		10/04/24 05:24	10/06/24 15:11	1
Phenanthrene	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1
Phenol	<0.97		0.97	ug/L		10/04/24 05:24	10/06/24 15:11	1
Pyrene	<0.19		0.19	ug/L		10/04/24 05:24	10/06/24 15:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	70		28 - 127	10/04/24 05:24	10/06/24 15:11	1
2-Fluorobiphenyl (Surr)	43		31 - 120	10/04/24 05:24	10/06/24 15:11	1
2-Fluorophenol (Surr)	42		17 - 120	10/04/24 05:24	10/06/24 15:11	1
Nitrobenzene-d5 (Surr)	43		27 - 120	10/04/24 05:24	10/06/24 15:11	1
Phenol-d6 (Surr)	26		10 - 120	10/04/24 05:24	10/06/24 15:11	1
p-Terphenyl-d14 (Surr)	47		45 - 120	10/04/24 05:24	10/06/24 15:11	1

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

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	10/04/24 05:24	10/14/24 11:26	1

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# Client Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

**Client Sample ID: AIEA GULCH WELLS PUMP 2  
(331-202-TP072)**

**Lab Sample ID: 380-115709-1**

**Date Collected: 10/01/24 10:46**

**Matrix: Drinking Water**

**Date Received: 10/02/24 10:20**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	77		33 - 139	10/04/24 05:24	10/14/24 11:26	1
2-Fluorobiphenyl (Surr)	53		33 - 126	10/04/24 05:24	10/14/24 11:26	1
2-Fluorophenol (Surr)	48		12 - 120	10/04/24 05:24	10/14/24 11:26	1
Nitrobenzene-d5 (Surr)	65		36 - 120	10/04/24 05:24	10/14/24 11:26	1
Phenol-d6 (Surr)	25		10 - 120	10/04/24 05:24	10/14/24 11:26	1
p-Terphenyl-d14 (Surr)	71		47 - 131	10/04/24 05:24	10/14/24 11:26	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			10/11/24 01:44	1

  

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		38 - 134		10/11/24 01:44	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		10/03/24 13:30	10/04/24 01:46	1
1,2-Dibromo-3-Chloropropane	<0.010		0.010	ug/L		10/03/24 13:30	10/04/24 01:46	1
1,2-Dibromoethane	<0.010		0.010	ug/L		10/03/24 13:30	10/04/24 01:46	1

  

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane (Surr)	105		60 - 140	10/03/24 13:30	10/04/24 01:46	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		10/04/24 15:37	10/04/24 21:24	1
Chlordane (n.o.s.)	<0.10		0.10	ug/L		10/04/24 15:37	10/04/24 21:24	1
PCB-1016	<0.071		0.071	ug/L		10/04/24 15:37	10/04/24 21:24	1
PCB-1221	<0.10		0.10	ug/L		10/04/24 15:37	10/04/24 21:24	1
PCB-1232	<0.10		0.10	ug/L		10/04/24 15:37	10/04/24 21:24	1
PCB-1242	<0.10		0.10	ug/L		10/04/24 15:37	10/04/24 21:24	1
PCB-1248	<0.10		0.10	ug/L		10/04/24 15:37	10/04/24 21:24	1
PCB-1254	<0.10		0.10	ug/L		10/04/24 15:37	10/04/24 21:24	1
PCB-1260	<0.071		0.071	ug/L		10/04/24 15:37	10/04/24 21:24	1
Polychlorinated biphenyls, Total	<0.10		0.10	ug/L		10/04/24 15:37	10/04/24 21:24	1

  

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	97		70 - 130	10/04/24 15:37	10/04/24 21:24	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		10/04/24 13:52	10/06/24 09:02	1
Motor Oil Range Organics [C24-C36]	<26		26	ug/L		10/04/24 13:52	10/06/24 09:02	1
C8-C18	<26		26	ug/L		10/04/24 13:52	10/06/24 09:02	1

  

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	114		60 - 130	10/04/24 13:52	10/06/24 09:02	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			10/04/24 17:15	1

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# Client Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

**Client Sample ID: AIEA GULCH WELLS PUMP 2  
(331-202-TP072)**

**Lab Sample ID: 380-115709-1**

Date Collected: 10/01/24 10:46

Matrix: Drinking Water

Date Received: 10/02/24 10:20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Hexafluoro-2-propanol (Surr)	91		54 - 120		10/04/24 17:15	1

**Method: EPA 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	180		5.0	ug/L			10/04/24 08:37	1
Chloride	96		2.5	mg/L			10/02/24 20:42	5
Nitrate as N	0.53		0.25	mg/L			10/02/24 20:42	5
Nitrite as N	<0.25		0.25	mg/L			10/02/24 20:42	5
Sulfate	13		1.3	mg/L			10/02/24 20:42	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			10/03/24 17:00	1
Magnesium	19		0.10	mg/L			10/03/24 17:00	1
Potassium	2.6	^5+	1.0	mg/L			10/03/24 17:00	1
Sodium	35		1.0	mg/L			10/03/24 17:00	1

**Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		1.0	ug/L		10/09/24 11:37	10/09/24 20:38	1
Arsenic	<1.0		1.0	ug/L		10/09/24 11:37	10/09/24 20:38	1
Beryllium	<1.0		1.0	ug/L		10/09/24 11:37	10/10/24 12:54	1
Cadmium	<0.50		0.50	ug/L		10/09/24 11:37	10/09/24 20:38	1
Chromium	1.7		1.0	ug/L		10/09/24 11:37	10/10/24 12:54	1
Copper	2.2		2.0	ug/L		10/09/24 11:37	10/09/24 20:38	1
Lead	<0.50		0.50	ug/L		10/09/24 11:37	10/09/24 20:38	1
Nickel	<5.0		5.0	ug/L		10/09/24 11:37	10/09/24 20:38	1
Selenium	<5.0		5.0	ug/L		10/09/24 11:37	10/09/24 20:38	1
Silver	<0.50		0.50	ug/L		10/09/24 11:37	10/09/24 20:38	1
Thallium	<1.0		1.0	ug/L		10/09/24 11:37	10/09/24 20:38	1
Zinc	<20		20	ug/L		10/09/24 11:37	10/09/24 20:38	1

**Method: EPA 245.1 - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.10		0.10	ug/L		10/14/24 13:26	10/14/24 18:37	1

**General Chemistry**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	53		2.0	mg/L			10/04/24 20:39	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	53		2.0	mg/L			10/04/24 20:39	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<2.0		2.0	mg/L			10/04/24 20:39	1
Specific Conductance (SM 2510B)	460	^2	2.0	umhos/cm			10/04/24 20:39	1
Total Dissolved Solids (SM 2540C)	310		20	mg/L			10/03/24 15:59	1
Fluoride (SM 4500 F C)	<0.050		0.050	mg/L			10/04/24 22:58	1
pH (SM 4500 H+ B)	7.8	HF		SU			10/04/24 20:39	1
Sulfide (SM 4500 S2 D)	<0.050		0.050	mg/L			10/04/24 15:49	1

# Client Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

**Client Sample ID: TRAVEL BLANK**

**Lab Sample ID: 380-115709-2**

Date Collected: 10/01/24 10:46

Matrix: Water

Date Received: 10/02/24 10:20

**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			10/05/24 03:44	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			10/07/24 18:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		70 - 130		10/07/24 18:41	1
4-Bromofluorobenzene (Surr)	112		70 - 130		10/07/24 18:41	1
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		10/07/24 18:41	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			10/05/24 03:44	1
1,1,1-Trichloroethane	<0.50		0.50	ug/L			10/05/24 03:44	1
1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L			10/05/24 03:44	1
1,1,2-Trichloroethane	<0.50		0.50	ug/L			10/05/24 03:44	1
1,1-Dichloroethylene	<0.50		0.50	ug/L			10/05/24 03:44	1
1,1-Dichloroethane	<0.50		0.50	ug/L			10/05/24 03:44	1
1,1-Dichloropropene	<0.50		0.50	ug/L			10/05/24 03:44	1
1,2,3-Trichlorobenzene	<0.50	^3+	0.50	ug/L			10/05/24 03:44	1
1,2,3-Trichloropropane	<0.50		0.50	ug/L			10/05/24 03:44	1
1,2,4-Trichlorobenzene	<0.50	^3+	0.50	ug/L			10/05/24 03:44	1
1,2,4-Trimethylbenzene	<0.50		0.50	ug/L			10/05/24 03:44	1
1,2-Dichloroethane	<0.50		0.50	ug/L			10/05/24 03:44	1
1,2-Dichloropropane	<0.50		0.50	ug/L			10/05/24 03:44	1
1,3,5-Trimethylbenzene	<0.50		0.50	ug/L			10/05/24 03:44	1
1,3-Dichloropropane	<0.50		0.50	ug/L			10/05/24 03:44	1
1,3-Dichloropropene, Total	<0.50		0.50	ug/L			10/05/24 03:44	1
2,2-Dichloropropane	<0.50		0.50	ug/L			10/05/24 03:44	1
2-Butanone (MEK)	<5.0		5.0	ug/L			10/05/24 03:44	1
4-Methyl-2-pentanone (MIBK)	<5.0		5.0	ug/L			10/05/24 03:44	1
Acetone	<500		500	ug/L			10/05/24 03:44	1
Benzene	<0.50		0.50	ug/L			10/05/24 03:44	1
Bromobenzene	<0.50		0.50	ug/L			10/05/24 03:44	1
Bromochloromethane	<0.50		0.50	ug/L			10/05/24 03:44	1
Bromodichloromethane	<0.50		0.50	ug/L			10/05/24 03:44	1
Bromoethane	<0.50		0.50	ug/L			10/05/24 03:44	1
Bromoform	<0.50		0.50	ug/L			10/05/24 03:44	1
Bromomethane (Methyl Bromide)	<0.50		0.50	ug/L			10/05/24 03:44	1
Carbon disulfide	<0.50		0.50	ug/L			10/05/24 03:44	1
Carbon tetrachloride	<0.50		0.50	ug/L			10/05/24 03:44	1
Chlorobenzene	<0.50		0.50	ug/L			10/05/24 03:44	1
Chlorodibromomethane	<0.50		0.50	ug/L			10/05/24 03:44	1
Chloroethane	<0.50		0.50	ug/L			10/05/24 03:44	1
Chloroform (Trichloromethane)	<0.50		0.50	ug/L			10/05/24 03:44	1
Chloromethane (methyl chloride)	<0.50	^3+	0.50	ug/L			10/05/24 03:44	1
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L			10/05/24 03:44	1
cis-1,3-Dichloropropene	<0.50		0.50	ug/L			10/05/24 03:44	1
Dibromomethane	<0.50		0.50	ug/L			10/05/24 03:44	1



# Client Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

**Client Sample ID: TRAVEL BLANK**

**Lab Sample ID: 380-115709-2**

Date Collected: 10/01/24 10:46

Matrix: Water

Date Received: 10/02/24 10:20

**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			10/05/24 03:44	1
Dichloromethane	<0.50		0.50	ug/L			10/05/24 03:44	1
Diisopropyl ether	<3.0		3.0	ug/L			10/05/24 03:44	1
Ethylbenzene	<0.50		0.50	ug/L			10/05/24 03:44	1
Hexachlorobutadiene	<0.50	^3+ **	0.50	ug/L			10/05/24 03:44	1
Isopropylbenzene	<0.50		0.50	ug/L			10/05/24 03:44	1
m,p-Xylenes	<0.50		0.50	ug/L			10/05/24 03:44	1
m-Dichlorobenzene (1,3-DCB)	<0.50		0.50	ug/L			10/05/24 03:44	1
Methyl-tert-butyl Ether (MTBE)	<0.50		0.50	ug/L			10/05/24 03:44	1
Naphthalene	<0.50	^3+	0.50	ug/L			10/05/24 03:44	1
n-Butylbenzene	<0.50		0.50	ug/L			10/05/24 03:44	1
N-Propylbenzene	<0.50		0.50	ug/L			10/05/24 03:44	1
o-Chlorotoluene	<0.50		0.50	ug/L			10/05/24 03:44	1
o-Dichlorobenzene (1,2-DCB)	<0.50		0.50	ug/L			10/05/24 03:44	1
o-Xylene	<0.50		0.50	ug/L			10/05/24 03:44	1
p-Chlorotoluene	<0.50		0.50	ug/L			10/05/24 03:44	1
p-Dichlorobenzene (1,4-DCB)	<0.50		0.50	ug/L			10/05/24 03:44	1
p-Isopropyltoluene	<0.50	^3+	0.50	ug/L			10/05/24 03:44	1
sec-Butylbenzene	<0.50	^3+	0.50	ug/L			10/05/24 03:44	1
Styrene	<0.50		0.50	ug/L			10/05/24 03:44	1
Tert-amyl methyl ether	<3.0		3.0	ug/L			10/05/24 03:44	1
Tert-butyl ethyl ether	<3.0		3.0	ug/L			10/05/24 03:44	1
tert-Butylbenzene	<0.50	^3+	0.50	ug/L			10/05/24 03:44	1
Tetrachloroethene (PCE)	<0.50		0.50	ug/L			10/05/24 03:44	1
Toluene	<0.50		0.50	ug/L			10/05/24 03:44	1
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L			10/05/24 03:44	1
trans-1,3-Dichloropropene	<0.50		0.50	ug/L			10/05/24 03:44	1
Trichloroethylene (TCE)	<0.50		0.50	ug/L			10/05/24 03:44	1
Trichlorofluoromethane (Freon 11)	<0.50		0.50	ug/L			10/05/24 03:44	1
Trichlorotrifluoroethane	<0.50		0.50	ug/L			10/05/24 03:44	1
Vinyl Chloride (VC)	<0.30		0.30	ug/L			10/05/24 03:44	1
Xylenes, Total	<0.50		0.50	ug/L			10/05/24 03:44	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Acetaldehyde	11	T J N	ug/L		1.37	75-07-0		10/05/24 03:44	1
Furfural	33	T J N	ug/L		9.69	98-01-1		10/05/24 03:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		70 - 130		10/05/24 03:44	1
4-Bromofluorobenzene (Surr)	101		70 - 130		10/05/24 03:44	1
Toluene-d8 (Surr)	97		70 - 130		10/05/24 03:44	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			10/10/24 22:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		38 - 134		10/10/24 22:15	1

# Client Sample Results

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

Job ID: 380-115709-1  
 SDG: Quarterly - Aiea Gulch Wells P2

**Client Sample ID: TRAVEL BLANK**

**Lab Sample ID: 380-115709-2**

Date Collected: 10/01/24 10:46

Matrix: Water

Date Received: 10/02/24 10:20

**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		10/03/24 13:30	10/04/24 02:28	1
1,2-Dibromo-3-Chloropropane	<0.010		0.010	ug/L		10/03/24 13:30	10/04/24 02:28	1
1,2-Dibromoethane	<0.010		0.010	ug/L		10/03/24 13:30	10/04/24 02:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dibromopropane (Surr)	105		60 - 140			10/03/24 13:30	10/04/24 02:28	1

- 1
- 2
- 3
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- 15
- 16

# Action Limit Summary

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

**Client Sample ID: AIEA GULCH WELLS PUMP 2  
(331-202-TP072)**

**Lab Sample ID: 380-115709-1**

## 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		
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	^3+	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	<0.019		ug/L		0.2		525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.58		ug/L		6		525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.58	*1	ug/L		400		525.2	Total/NA
Endrin	<0.0097		ug/L		2		525.2	Total/NA
gamma-BHC (Lindane)	<0.0097		ug/L		0.2		525.2	Total/NA
Heptachlor	<0.0097		ug/L		0.4		525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.0097		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	*1	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	96		mg/L			250	300.0	Total/NA
Nitrate as N	0.53		mg/L		10		300.0	Total/NA

# Action Limit Summary

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

**Client Sample ID: AIEA GULCH WELLS PUMP 2  
(331-202-TP072) (Continued)**

**Lab Sample ID: 380-115709-1**

## 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	Method	Prep Type
						S		
Nitrite as N	<0.25		mg/L		1		300.0	Total/NA
Sulfate	13		mg/L			250	300.0	Total/NA
Mercury	<0.10		ug/L		2		245.1	Total/NA
Total Dissolved Solids	310		mg/L			500	SM 2540C	Total/NA
Fluoride	<0.050		mg/L		4	2	SM 4500 F C	Total/NA
pH	7.8	HF	SU			6.5	SM 4500 H+ B	Total/NA

**Client Sample ID: TRAVEL BLANK**

**Lab Sample ID: 380-115709-2**

## 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
1,1,1-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	^3+	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
cis-1,2-Dichloroethylene	<0.50		ug/L	70.00	70	0.50	524.2	Total/NA
Dichloromethane	<0.50		ug/L	5.000	5	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
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
Xylenes, Total	<0.50		ug/L	10000	10000	0.50	524.2	Total/NA
1,2,3-Trichloropropane	<0.020		ug/L	0.6000		0.020	504.1	Total/NA
1,2-Dibromo-3-Chloropropane	<0.010		ug/L			0.010	504.1	Total/NA
1,2-Dibromoethane	<0.010		ug/L			0.010	504.1	Total/NA

# Surrogate Summary

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

## 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)
380-115709-1	AIEA GULCH WELLS PUMP 2 (	99	105	99

**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)
380-115709-2	TRAVEL BLANK	100	112	101
LCS 380-112090/2	Lab Control Sample	101	102	101
LCS 380-112090/3	Lab Control Sample Dup	101	108	102
MB 380-112090/5	Method Blank	101	104	99

**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 380-112090/4	Lab Control Sample	100	104	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)

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)
380-115709-1	AIEA GULCH WELLS PUMP 2 (	99	103	97

**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: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

Matrix: 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)
380-115709-2	TRAVEL BLANK	103	101	97
LCS 380-111815/11	Lab Control Sample	99	98	100
LCSD 380-111815/12	Lab Control Sample Dup	100	99	97
MB 380-111815/15	Method Blank	97	100	97
MRL 380-111815/13	Lab Control Sample	100	99	96
MRL 380-111815/14	Lab Control Sample	100	102	99

### 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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		2NMX (70-130)	PRY (70-130)	TPP (70-130)
380-115709-1	AIEA GULCH WELLS PUMP 2 (	96	85	98
380-115709-1 MS	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	97	91	105
380-115709-1 MSD	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	96	89	103

### 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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		2NMX (70-130)	PRY (70-130)	TPP (70-130)
LCS 380-111994/23-A	Lab Control Sample	97	84	103
LCSD 380-111994/24-A	Lab Control Sample Dup	97	75	103
MB 380-111994/21-A	Method Blank	96	88	105
MRL 380-111994/22-A	Lab Control Sample	96	73	99

### 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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (33-139)	FBP (33-126)	2FP (12-120)	NBZ (36-120)	PHL6 (10-120)	TPHd14 (47-131)
380-115709-1	AIEA GULCH WELLS PUMP 2 (	77	53	48	65	25	71

### Surrogate Legend

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# Surrogate Summary

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

Job ID: 380-115709-1  
 SDG: Quarterly - Aiea Gulch Wells P2

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 570-487444/1-A	Method Blank	79	75	60	83	32	84

### 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)
380-115709-1	AIEA GULCH WELLS PUMP 2 (	70	43	42	43	26	47

### 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)
380-115753-A-3-A MS	Matrix Spike	63	37	42	29	27	48
380-115753-A-3-B MSD	Matrix Spike Duplicate	68	39	45	31	30	49
LCS 570-487444/2-A	Lab Control Sample	86	45	51	34	39	59
LCSD 570-487444/3-A	Lab Control Sample Dup	85	44	50	33	37	57
MB 570-487444/1-A	Method Blank	84	48	48	52	32	52

### 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: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

## 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)
380-115709-1	AIEA GULCH WELLS PUMP 2 (	85

#### 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)
380-115709-2	TRAVEL BLANK	82
380-115753-B-3 MS	Matrix Spike	92
380-115753-B-3 MSD	Matrix Spike Duplicate	93
LCS 570-489970/1010	Lab Control Sample	95
LCSD 570-489970/12	Lab Control Sample Dup	96
MB 570-489970/11	Method Blank	89
MRL 570-489970/1005	Lab Control Sample	79

#### 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)
380-115709-1	AIEA GULCH WELLS PUMP 2 (	105

#### 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)
380-115709-2	TRAVEL BLANK	105
380-115838-CA-1-A MS	Matrix Spike	97
380-115841-BX-1-A DU	Duplicate	100
LCS 380-111631/38-A	Lab Control Sample	107
MBL 380-111631/13-A	Method Blank	99
MRL 380-111631/11-A	Lab Control Sample	92
MRL 380-111631/12-A	Lab Control Sample	100

#### Surrogate Legend

DBPP = 1,2-Dibromopropane (Surr)



# Surrogate Summary

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

## 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)
380-115709-1	AIEA GULCH WELLS PUMP 2 (	97

#### 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)
380-115838-BX-1-B MS	Matrix Spike	91
380-115838-BY-1-B MS	Matrix Spike	93
380-115841-BY-1-B MS	Matrix Spike	90
380-115841-BZ-1-B MS	Matrix Spike	101
LCS 380-111931/28-A	Lab Control Sample	98
LCS 380-111931/30-A	Lab Control Sample	98
LCSD 380-111931/29-A	Lab Control Sample Dup	93
MB 380-111931/3-A	Method Blank	95
MRL 380-111931/1-A	Lab Control Sample	98
MRL 380-111931/2-A	Lab Control Sample	100

#### 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)
380-115709-1	AIEA GULCH WELLS PUMP 2 (	114

#### Surrogate Legend

OTCSN = n-Octacosane (Surr)

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

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTCSN1 (60-130)
380-115753-C-3-A MS	Matrix Spike	111
380-115753-C-3-B MSD	Matrix Spike Duplicate	112
LCS 570-488004/2-A	Lab Control Sample	108
LCSD 570-488004/3-A	Lab Control Sample Dup	116
MB 570-488004/1-A	Method Blank	118
MRL 570-488004/4-A	Lab Control Sample	112

#### Surrogate Legend

OTCSN = n-Octacosane (Surr)

# Surrogate Summary

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

## 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	HF2PP1 (54-120)
380-115709-1	AIEA GULCH WELLS PUMP 2 (	91
380-115709-1 MS	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	96
380-115709-1 MSD	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	91

#### 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)
LCS 570-487891/11	Lab Control Sample	104
LCSD 570-487891/12	Lab Control Sample Dup	107
MB 570-487891/10	Method Blank	114
MRL 570-487891/13	Lab Control Sample	100

#### Surrogate Legend

HF2PP = Hexafluoro-2-propanol (Surr)

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: MB 380-111815/15**  
**Matrix: Water**  
**Analysis Batch: 111815**

**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			10/04/24 22:07	1
1,1,1-Trichloroethane	<0.50		0.50	ug/L			10/04/24 22:07	1
1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L			10/04/24 22:07	1
1,1,2-Trichloroethane	<0.50		0.50	ug/L			10/04/24 22:07	1
1,1-Dichloroethylene	<0.50		0.50	ug/L			10/04/24 22:07	1
1,1-Dichloroethane	<0.50		0.50	ug/L			10/04/24 22:07	1
1,1-Dichloropropene	<0.50		0.50	ug/L			10/04/24 22:07	1
1,2,3-Trichlorobenzene	<0.50		0.50	ug/L			10/04/24 22:07	1
1,2,3-Trichloropropane	<0.50		0.50	ug/L			10/04/24 22:07	1
1,2,4-Trichlorobenzene	<0.50		0.50	ug/L			10/04/24 22:07	1
1,2,4-Trimethylbenzene	<0.50		0.50	ug/L			10/04/24 22:07	1
1,2-Dichloroethane	<0.50		0.50	ug/L			10/04/24 22:07	1
1,2-Dichloropropane	<0.50		0.50	ug/L			10/04/24 22:07	1
1,3,5-Trimethylbenzene	<0.50		0.50	ug/L			10/04/24 22:07	1
1,3-Dichloropropane	<0.50		0.50	ug/L			10/04/24 22:07	1
1,3-Dichloropropene, Total	<0.50		0.50	ug/L			10/04/24 22:07	1
2,2-Dichloropropane	<0.50		0.50	ug/L			10/04/24 22:07	1
2-Butanone (MEK)	<5.0		5.0	ug/L			10/04/24 22:07	1
4-Methyl-2-pentanone (MIBK)	<5.0		5.0	ug/L			10/04/24 22:07	1
Acetone	<500		500	ug/L			10/04/24 22:07	1
Benzene	<0.50		0.50	ug/L			10/04/24 22:07	1
Bromobenzene	<0.50		0.50	ug/L			10/04/24 22:07	1
Bromochloromethane	<0.50		0.50	ug/L			10/04/24 22:07	1
Bromodichloromethane	<0.50		0.50	ug/L			10/04/24 22:07	1
Bromoethane	<0.50		0.50	ug/L			10/04/24 22:07	1
Bromoform	<0.50		0.50	ug/L			10/04/24 22:07	1
Bromomethane (Methyl Bromide)	<0.50		0.50	ug/L			10/04/24 22:07	1
Carbon disulfide	<0.50		0.50	ug/L			10/04/24 22:07	1
Carbon tetrachloride	<0.50		0.50	ug/L			10/04/24 22:07	1
Chlorobenzene	<0.50		0.50	ug/L			10/04/24 22:07	1
Chlorodibromomethane	<0.50		0.50	ug/L			10/04/24 22:07	1
Chloroethane	<0.50		0.50	ug/L			10/04/24 22:07	1
Chloroform (Trichloromethane)	<0.50		0.50	ug/L			10/04/24 22:07	1
Chloromethane (methyl chloride)	<0.50		0.50	ug/L			10/04/24 22:07	1
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L			10/04/24 22:07	1
cis-1,3-Dichloropropene	<0.50		0.50	ug/L			10/04/24 22:07	1
Dibromomethane	<0.50		0.50	ug/L			10/04/24 22:07	1
Dichlorodifluoromethane	<0.50		0.50	ug/L			10/04/24 22:07	1
Dichloromethane	<0.50		0.50	ug/L			10/04/24 22:07	1
Diisopropyl ether	<3.0		3.0	ug/L			10/04/24 22:07	1
Ethylbenzene	<0.50		0.50	ug/L			10/04/24 22:07	1
Hexachlorobutadiene	<0.50		0.50	ug/L			10/04/24 22:07	1
Isopropylbenzene	<0.50		0.50	ug/L			10/04/24 22:07	1
m,p-Xylenes	<0.50		0.50	ug/L			10/04/24 22:07	1
m-Dichlorobenzene (1,3-DCB)	<0.50		0.50	ug/L			10/04/24 22:07	1
Methyl-tert-butyl Ether (MTBE)	<0.50		0.50	ug/L			10/04/24 22:07	1
Naphthalene	<0.50		0.50	ug/L			10/04/24 22:07	1
n-Butylbenzene	<0.50		0.50	ug/L			10/04/24 22:07	1

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# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: MB 380-111815/15**  
**Matrix: Water**  
**Analysis Batch: 111815**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	<0.50		0.50	ug/L			10/04/24 22:07	1
o-Chlorotoluene	<0.50		0.50	ug/L			10/04/24 22:07	1
o-Dichlorobenzene (1,2-DCB)	<0.50		0.50	ug/L			10/04/24 22:07	1
o-Xylene	<0.50		0.50	ug/L			10/04/24 22:07	1
p-Chlorotoluene	<0.50		0.50	ug/L			10/04/24 22:07	1
p-Dichlorobenzene (1,4-DCB)	<0.50		0.50	ug/L			10/04/24 22:07	1
p-Isopropyltoluene	<0.50		0.50	ug/L			10/04/24 22:07	1
sec-Butylbenzene	<0.50		0.50	ug/L			10/04/24 22:07	1
Styrene	<0.50		0.50	ug/L			10/04/24 22:07	1
Tert-amyl methyl ether	<3.0		3.0	ug/L			10/04/24 22:07	1
Tert-butyl ethyl ether	<3.0		3.0	ug/L			10/04/24 22:07	1
tert-Butylbenzene	<0.50		0.50	ug/L			10/04/24 22:07	1
Tetrachloroethene (PCE)	<0.50		0.50	ug/L			10/04/24 22:07	1
Toluene	<0.50		0.50	ug/L			10/04/24 22:07	1
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L			10/04/24 22:07	1
trans-1,3-Dichloropropene	<0.50		0.50	ug/L			10/04/24 22:07	1
Trichloroethylene (TCE)	<0.50		0.50	ug/L			10/04/24 22:07	1
Trichlorofluoromethane (Freon 11)	<0.50		0.50	ug/L			10/04/24 22:07	1
Trichlorotrifluoroethane	<0.50		0.50	ug/L			10/04/24 22:07	1
Vinyl Chloride (VC)	<0.30		0.30	ug/L			10/04/24 22:07	1
Xylenes, Total	<0.50		0.50	ug/L			10/04/24 22:07	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Propane, 2-ethoxy-	0.595	T J N	ug/L		2.61	625-54-7		10/04/24 22:07	1
Unknown	0.530	T J	ug/L		6.27	N/A		10/04/24 22:07	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		70 - 130		10/04/24 22:07	1
4-Bromofluorobenzene (Surr)	100		70 - 130		10/04/24 22:07	1
Toluene-d8 (Surr)	97		70 - 130		10/04/24 22:07	1

**Lab Sample ID: LCS 380-111815/11**  
**Matrix: Water**  
**Analysis Batch: 111815**

**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	4.88		ug/L		98	70 - 130
1,1,1-Trichloroethane	5.00	4.43		ug/L		89	70 - 130
1,1,2,2-Tetrachloroethane	5.00	4.67		ug/L		93	70 - 130
1,1,2-Trichloroethane	5.00	4.54		ug/L		91	70 - 130
1,1-Dichloroethylene	5.00	4.48		ug/L		90	70 - 130
1,1-Dichloroethane	5.00	4.53		ug/L		91	70 - 130
1,1-Dichloropropene	5.00	4.25		ug/L		85	70 - 130
1,2,3-Trichlorobenzene	5.00	6.00		ug/L		120	70 - 130
1,2,3-Trichloropropane	5.00	4.79		ug/L		96	70 - 130
1,2,4-Trichlorobenzene	5.00	5.99		ug/L		120	70 - 130
1,2,4-Trimethylbenzene	5.00	5.31		ug/L		106	70 - 130
1,2-Dichloroethane	5.00	4.37		ug/L		87	70 - 130

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# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: LCS 380-111815/11**  
**Matrix: Water**  
**Analysis Batch: 111815**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichloropropane	5.00	4.10		ug/L		82	70 - 130
1,3,5-Trimethylbenzene	5.00	5.20		ug/L		104	70 - 130
1,3-Dichloropropane	5.00	4.39		ug/L		88	70 - 130
1,3-Dichloropropene, Total	10.0	9.71		ug/L		97	70 - 130
2,2-Dichloropropane	5.00	4.31		ug/L		86	70 - 130
2-Butanone (MEK)	50.0	43.6		ug/L		87	70 - 130
4-Methyl-2-pentanone (MIBK)	50.0	44.6		ug/L		89	70 - 130
Acetone	50.0	46.6	J	ug/L		93	70 - 130
Benzene	5.00	4.50		ug/L		90	70 - 130
Bromobenzene	5.00	4.57		ug/L		91	70 - 130
Bromochloromethane	5.00	4.30		ug/L		86	70 - 130
Bromodichloromethane	5.00	4.76		ug/L		95	70 - 130
Bromoethane	5.00	4.34		ug/L		87	70 - 130
Bromoform	5.00	5.38		ug/L		108	70 - 130
Bromomethane (Methyl Bromide)	5.00	4.63		ug/L		93	70 - 130
Carbon disulfide	5.00	4.32		ug/L		86	70 - 130
Carbon tetrachloride	5.00	4.40		ug/L		88	70 - 130
Chlorobenzene	5.00	4.58		ug/L		92	70 - 130
Chlorodibromomethane	5.00	4.99		ug/L		100	70 - 130
cis-1,3-Dichloropropene	5.00	4.70		ug/L		94	70 - 130
Dichloromethane	5.00	4.18		ug/L		84	70 - 130
Diisopropyl ether	5.00	4.49		ug/L		90	70 - 130
Ethylbenzene	5.00	4.60		ug/L		92	70 - 130
Hexachlorobutadiene	5.00	7.93	*+	ug/L		159	70 - 130
Isopropylbenzene	5.00	4.81		ug/L		96	70 - 130
m,p-Xylenes	10.0	9.32		ug/L		93	70 - 130
m-Dichlorobenzene (1,3-DCB)	5.00	4.89		ug/L		98	70 - 130
Methyl-tert-butyl Ether (MTBE)	5.00	4.44		ug/L		89	70 - 130
Naphthalene	5.00	5.79		ug/L		116	70 - 130
n-Butylbenzene	5.00	5.65		ug/L		113	70 - 130
N-Propylbenzene	5.00	4.94		ug/L		99	70 - 130
o-Chlorotoluene	5.00	5.05		ug/L		101	70 - 130
o-Dichlorobenzene (1,2-DCB)	5.00	4.99		ug/L		100	70 - 130
o-Xylene	5.00	4.76		ug/L		95	70 - 130
p-Chlorotoluene	5.00	4.76		ug/L		95	70 - 130
p-Dichlorobenzene (1,4-DCB)	5.00	4.82		ug/L		96	70 - 130
p-Isopropyltoluene	5.00	5.55		ug/L		111	70 - 130
sec-Butylbenzene	5.00	5.39		ug/L		108	70 - 130
Styrene	5.00	4.77		ug/L		95	70 - 130
Tert-amyl methyl ether	5.00	4.56		ug/L		91	70 - 130
Tert-butyl ethyl ether	5.00	4.49		ug/L		90	70 - 130
tert-Butylbenzene	5.00	5.23		ug/L		105	70 - 130
Tetrachloroethene (PCE)	5.00	4.53		ug/L		91	70 - 130
Toluene	5.00	4.55		ug/L		91	70 - 130
trans-1,2-Dichloroethylene	5.00	4.37		ug/L		87	70 - 130
trans-1,3-Dichloropropene	5.00	5.01		ug/L		100	70 - 130
Trichloroethylene (TCE)	5.00	4.55		ug/L		91	70 - 130
Trichlorofluoromethane (Freon 11)	5.00	5.47		ug/L		109	70 - 130

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: LCS 380-111815/11**  
**Matrix: Water**  
**Analysis Batch: 111815**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Trichlorotrifluoroethane	5.00	4.38		ug/L		88	70 - 130
Vinyl Chloride (VC)	5.00	4.63		ug/L		93	70 - 130
Xylenes, Total	15.0	14.1		ug/L		94	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
4-Bromofluorobenzene (Surr)	98		70 - 130
Toluene-d8 (Surr)	100		70 - 130

**Lab Sample ID: LCSD 380-111815/12**  
**Matrix: Water**  
**Analysis Batch: 111815**

**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	4.77		ug/L		95	70 - 130	2	20
1,1,1-Trichloroethane	5.00	4.36		ug/L		87	70 - 130	2	20
1,1,1,2-Tetrachloroethane	5.00	4.67		ug/L		93	70 - 130	0	20
1,1,2-Trichloroethane	5.00	4.40		ug/L		88	70 - 130	3	20
1,1-Dichlorethylene	5.00	4.52		ug/L		90	70 - 130	1	20
1,1-Dichloroethane	5.00	4.55		ug/L		91	70 - 130	0	20
1,1-Dichloropropene	5.00	4.19		ug/L		84	70 - 130	1	20
1,2,3-Trichlorobenzene	5.00	5.46		ug/L		109	70 - 130	9	20
1,2,3-Trichloropropane	5.00	4.86		ug/L		97	70 - 130	1	20
1,2,4-Trichlorobenzene	5.00	5.64		ug/L		113	70 - 130	6	20
1,2,4-Trimethylbenzene	5.00	4.98		ug/L		100	70 - 130	7	20
1,2-Dichloroethane	5.00	4.61		ug/L		92	70 - 130	5	20
1,2-Dichloropropane	5.00	3.97		ug/L		79	70 - 130	3	20
1,3,5-Trimethylbenzene	5.00	4.91		ug/L		98	70 - 130	6	20
1,3-Dichloropropane	5.00	4.32		ug/L		86	70 - 130	1	20
1,3-Dichloropropene, Total	10.0	8.92		ug/L		89	70 - 130	8	20
2,2-Dichloropropane	5.00	4.46		ug/L		89	70 - 130	3	20
2-Butanone (MEK)	50.0	41.9		ug/L		84	70 - 130	4	20
4-Methyl-2-pentanone (MIBK)	50.0	43.2		ug/L		86	70 - 130	3	20
Acetone	50.0	39.3	J	ug/L		79	70 - 130	17	20
Benzene	5.00	4.34		ug/L		87	70 - 130	3	20
Bromobenzene	5.00	4.62		ug/L		92	70 - 130	1	20
Bromochloromethane	5.00	4.50		ug/L		90	70 - 130	5	20
Bromodichloromethane	5.00	4.55		ug/L		91	70 - 130	5	20
Bromoethane	5.00	4.41		ug/L		88	70 - 130	2	20
Bromoform	5.00	4.90		ug/L		98	70 - 130	9	20
Bromomethane (Methyl Bromide)	5.00	4.66		ug/L		93	70 - 130	1	20
Carbon disulfide	5.00	4.38		ug/L		88	70 - 130	1	20
Carbon tetrachloride	5.00	4.26		ug/L		85	70 - 130	3	20
Chlorobenzene	5.00	4.43		ug/L		89	70 - 130	3	20
Chlorodibromomethane	5.00	4.66		ug/L		93	70 - 130	7	20
cis-1,3-Dichloropropene	5.00	4.33		ug/L		87	70 - 130	8	20
Dichloromethane	5.00	4.23		ug/L		85	70 - 130	1	20
Diisopropyl ether	5.00	4.42		ug/L		88	70 - 130	1	20

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: LCSD 380-111815/12**  
**Matrix: Water**  
**Analysis Batch: 111815**

**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
Ethylbenzene	5.00	4.47		ug/L		89	70 - 130	3	20
Hexachlorobutadiene	5.00	6.56	*+	ug/L		131	70 - 130	19	20
Isopropylbenzene	5.00	4.58		ug/L		92	70 - 130	5	20
m,p-Xylenes	10.0	8.96		ug/L		90	70 - 130	4	20
m-Dichlorobenzene (1,3-DCB)	5.00	4.82		ug/L		96	70 - 130	1	20
Methyl-tert-butyl Ether (MTBE)	5.00	4.50		ug/L		90	70 - 130	1	20
Naphthalene	5.00	5.45		ug/L		109	70 - 130	6	20
n-Butylbenzene	5.00	5.43		ug/L		109	70 - 130	4	20
N-Propylbenzene	5.00	4.78		ug/L		96	70 - 130	3	20
o-Chlorotoluene	5.00	4.79		ug/L		96	70 - 130	5	20
o-Dichlorobenzene (1,2-DCB)	5.00	4.97		ug/L		99	70 - 130	0	20
o-Xylene	5.00	4.63		ug/L		93	70 - 130	3	20
p-Chlorotoluene	5.00	4.70		ug/L		94	70 - 130	1	20
p-Dichlorobenzene (1,4-DCB)	5.00	4.88		ug/L		98	70 - 130	1	20
p-Isopropyltoluene	5.00	5.18		ug/L		104	70 - 130	7	20
sec-Butylbenzene	5.00	4.96		ug/L		99	70 - 130	8	20
Styrene	5.00	4.70		ug/L		94	70 - 130	2	20
Tert-amyl methyl ether	5.00	4.55		ug/L		91	70 - 130	0	20
Tert-butyl ethyl ether	5.00	4.51		ug/L		90	70 - 130	0	20
tert-Butylbenzene	5.00	4.79		ug/L		96	70 - 130	9	20
Tetrachloroethene (PCE)	5.00	4.32		ug/L		86	70 - 130	5	20
Toluene	5.00	4.41		ug/L		88	70 - 130	3	20
trans-1,2-Dichloroethylene	5.00	4.45		ug/L		89	70 - 130	2	20
trans-1,3-Dichloropropene	5.00	4.59		ug/L		92	70 - 130	9	20
Trichloroethylene (TCE)	5.00	4.54		ug/L		91	70 - 130	0	20
Trichlorofluoromethane (Freon 11)	5.00	5.57		ug/L		111	70 - 130	2	20
Trichlorotrifluoroethane	5.00	4.46		ug/L		89	70 - 130	2	20
Vinyl Chloride (VC)	5.00	4.84		ug/L		97	70 - 130	4	20
Xylenes, Total	15.0	13.6		ug/L		91	70 - 130	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	99		70 - 130
Toluene-d8 (Surr)	97		70 - 130

**Lab Sample ID: MRL 380-111815/13**  
**Matrix: Water**  
**Analysis Batch: 111815**

**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	0.553		ug/L		111	50 - 150
Vinyl Chloride (VC)	0.250	0.246	J	ug/L		98	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	99		70 - 130
Toluene-d8 (Surr)	96		70 - 130

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: MRL 380-111815/14**  
**Matrix: Water**  
**Analysis Batch: 111815**

**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	0.581		ug/L		116	50 - 150
1,1,1-Trichloroethane	0.500	0.614		ug/L		123	50 - 150
1,1,2,2-Tetrachloroethane	0.500	0.660		ug/L		132	50 - 150
1,1,2-Trichloroethane	0.500	0.615		ug/L		123	50 - 150
1,1-Dichloroethylene	0.500	0.682		ug/L		136	50 - 150
1,1-Dichloroethane	0.500	0.641		ug/L		128	50 - 150
1,1-Dichloropropene	0.500	0.626		ug/L		125	50 - 150
1,2,3-Trichlorobenzene	0.500	0.814	^3+	ug/L		163	50 - 150
1,2,3-Trichloropropane	0.500	0.664		ug/L		133	50 - 150
1,2,4-Trichlorobenzene	0.500	0.770	^3+	ug/L		154	50 - 150
1,2,4-Trimethylbenzene	0.500	0.733		ug/L		147	50 - 150
1,2-Dichloroethane	0.500	0.622		ug/L		124	50 - 150
1,2-Dichloropropane	0.500	0.624		ug/L		125	50 - 150
1,3,5-Trimethylbenzene	0.500	0.720		ug/L		144	50 - 150
1,3-Dichloropropane	0.500	0.592		ug/L		118	50 - 150
1,3-Dichloropropene, Total	1.00	1.02		ug/L		102	50 - 150
2,2-Dichloropropane	0.500	0.694		ug/L		139	50 - 150
2-Butanone (MEK)	5.00	5.85		ug/L		117	50 - 150
4-Methyl-2-pentanone (MIBK)	5.00	6.52		ug/L		130	50 - 150
Acetone	5.00	4.32	J	ug/L		86	50 - 150
Benzene	0.500	0.655		ug/L		131	50 - 150
Bromobenzene	0.500	0.597		ug/L		119	50 - 150
Bromochloromethane	0.500	0.609		ug/L		122	50 - 150
Bromodichloromethane	0.500	0.585		ug/L		117	50 - 150
Bromoethane	0.500	0.654		ug/L		131	50 - 150
Bromoform	0.500	0.582		ug/L		116	50 - 150
Bromomethane (Methyl Bromide)	0.500	0.603		ug/L		121	50 - 150
Carbon disulfide	0.500	0.592		ug/L		118	50 - 150
Carbon tetrachloride	0.500	0.616		ug/L		123	50 - 150
Chlorobenzene	0.500	0.627		ug/L		125	50 - 150
Chlorodibromomethane	0.500	0.558		ug/L		112	50 - 150
cis-1,3-Dichloropropene	0.500	0.520		ug/L		104	50 - 150
Dichloromethane	0.500	0.660		ug/L		132	50 - 150
Diisopropyl ether	0.500	0.626	J	ug/L		125	50 - 150
Ethylbenzene	0.500	0.631		ug/L		126	50 - 150
Hexachlorobutadiene	0.500	1.02	^3+	ug/L		204	50 - 150
Isopropylbenzene	0.500	0.671		ug/L		134	50 - 150
m,p-Xylenes	1.00	1.22		ug/L		122	50 - 150
m-Dichlorobenzene (1,3-DCB)	0.500	0.692		ug/L		138	50 - 150
Methyl-tert-butyl Ether (MTBE)	0.500	0.632		ug/L		126	50 - 150
Naphthalene	0.500	0.755	^3+	ug/L		151	50 - 150
n-Butylbenzene	0.500	0.674		ug/L		135	50 - 150
N-Propylbenzene	0.500	0.630		ug/L		126	50 - 150
o-Chlorotoluene	0.500	0.671		ug/L		134	50 - 150
o-Dichlorobenzene (1,2-DCB)	0.500	0.632		ug/L		126	50 - 150
o-Xylene	0.500	0.637		ug/L		127	50 - 150
p-Chlorotoluene	0.500	0.629		ug/L		126	50 - 150
p-Dichlorobenzene (1,4-DCB)	0.500	0.681		ug/L		136	50 - 150



# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: MRL 380-111815/14**  
**Matrix: Water**  
**Analysis Batch: 111815**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
p-Isopropyltoluene	0.500	0.779	^3+	ug/L		156	50 - 150
sec-Butylbenzene	0.500	0.760	^3+	ug/L		152	50 - 150
Styrene	0.500	0.587		ug/L		117	50 - 150
Tert-amyl methyl ether	0.500	0.652	J	ug/L		130	50 - 150
Tert-butyl ethyl ether	0.500	0.652	J	ug/L		130	50 - 150
tert-Butylbenzene	0.500	0.754	^3+	ug/L		151	50 - 150
Tetrachloroethene (PCE)	0.500	0.607		ug/L		121	50 - 150
Toluene	0.500	0.621		ug/L		124	50 - 150
trans-1,2-Dichloroethylene	0.500	0.623		ug/L		125	50 - 150
trans-1,3-Dichloropropene	0.500	0.500		ug/L		100	50 - 150
Trichloroethylene (TCE)	0.500	0.605		ug/L		121	50 - 150
Trichlorofluoromethane (Freon 11)	0.500	0.634		ug/L		127	50 - 150
Trichlorotrifluoroethane	0.500	0.608		ug/L		122	50 - 150
Vinyl Chloride (VC)	0.500	0.562		ug/L		112	50 - 150
Xylenes, Total	1.50	1.86		ug/L		124	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	102		70 - 130
Toluene-d8 (Surr)	99		70 - 130

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

**Lab Sample ID: MB 380-112090/5**  
**Matrix: Water**  
**Analysis Batch: 112090**

**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			10/07/24 17:11	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		70 - 130		10/07/24 17:11	1
4-Bromofluorobenzene (Surr)	104		70 - 130		10/07/24 17:11	1
1,2-Dichloroethane-d4 (Surr)	99		70 - 130		10/07/24 17:11	1

**Lab Sample ID: LCS 380-112090/2**  
**Matrix: Water**  
**Analysis Batch: 112090**

**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	4.11		ug/L		82	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	101		70 - 130
4-Bromofluorobenzene (Surr)	102		70 - 130
1,2-Dichloroethane-d4 (Surr)	101		70 - 130

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: LCSD 380-112090/3**  
**Matrix: Water**  
**Analysis Batch: 112090**

**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	4.56		ug/L		91	70 - 130	10	20
<b>LCSD LCSD</b>									
Surrogate	%Recovery	Qualifier	Limits						
Toluene-d8 (Surr)	101		70 - 130						
4-Bromofluorobenzene (Surr)	108		70 - 130						
1,2-Dichloroethane-d4 (Surr)	102		70 - 130						

**Lab Sample ID: MRL 380-112090/4**  
**Matrix: Water**  
**Analysis Batch: 112090**

**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	1.76	J	ug/L		88	50 - 150		
<b>MRL MRL</b>									
Surrogate	%Recovery	Qualifier	Limits						
Toluene-d8 (Surr)	100		50 - 150						
4-Bromofluorobenzene (Surr)	104		50 - 150						
1,2-Dichloroethane-d4 (Surr)	101		50 - 150						

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

**Lab Sample ID: MB 380-111994/21-A**  
**Matrix: Water**  
**Analysis Batch: 112221**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 111994**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
2,4'-DDE	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
2,4'-DDT	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
2,4-Dinitrotoluene	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
2,6-Dinitrotoluene	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
4,4'-DDD	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
4,4'-DDE	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
4,4'-DDT	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Acenaphthene	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Acenaphthylene	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Acetochlor	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Alachlor	<0.048		0.048	ug/L		10/06/24 12:09	10/08/24 10:03	1
alpha-BHC	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
alpha-Chlordane	<0.048		0.048	ug/L		10/06/24 12:09	10/08/24 10:03	1
Anthracene	<0.019		0.019	ug/L		10/06/24 12:09	10/08/24 10:03	1
Atrazine	<0.048		0.048	ug/L		10/06/24 12:09	10/08/24 10:03	1
Benz(a)anthracene	<0.048		0.048	ug/L		10/06/24 12:09	10/08/24 10:03	1
Benzo[a]pyrene	<0.019		0.019	ug/L		10/06/24 12:09	10/08/24 10:03	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		10/06/24 12:09	10/08/24 10:03	1
Benzo[g,h,i]perylene	<0.048		0.048	ug/L		10/06/24 12:09	10/08/24 10:03	1
Benzo[k]fluoranthene	<0.019		0.019	ug/L		10/06/24 12:09	10/08/24 10:03	1
beta-BHC	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1

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# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: MB 380-111994/21-A**  
**Matrix: Water**  
**Analysis Batch: 112221**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 111994**

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		10/06/24 12:09	10/08/24 10:03	1
Aldrin	<0.0097		0.0097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Bromacil	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Butachlor	<0.048		0.048	ug/L		10/06/24 12:09	10/08/24 10:03	1
Butylbenzylphthalate	<0.48		0.48	ug/L		10/06/24 12:09	10/08/24 10:03	1
Chlorobenzilate	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Chloroneb	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Chlorpyrifos	<0.048		0.048	ug/L		10/06/24 12:09	10/08/24 10:03	1
Chrysene	<0.019		0.019	ug/L		10/06/24 12:09	10/08/24 10:03	1
delta-BHC	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Di(2-ethylhexyl)adipate	<0.58		0.58	ug/L		10/06/24 12:09	10/08/24 10:03	1
Dibenz(a,h)anthracene	<0.048		0.048	ug/L		10/06/24 12:09	10/08/24 10:03	1
Diclorvos (DDVP)	<0.048		0.048	ug/L		10/06/24 12:09	10/08/24 10:03	1
Dieldrin	<0.0097		0.0097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Diethylphthalate	<0.48		0.48	ug/L		10/06/24 12:09	10/08/24 10:03	1
Dimethylphthalate	<0.48		0.48	ug/L		10/06/24 12:09	10/08/24 10:03	1
Di-n-butyl phthalate	<0.97		0.97	ug/L		10/06/24 12:09	10/08/24 10:03	1
Di-n-octyl phthalate	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Endosulfan I (Alpha)	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Endosulfan II (Beta)	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Endosulfan sulfate	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Endrin	<0.0097		0.0097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Endrin aldehyde	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
EPTC	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Fluoranthene	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Fluorene	<0.048		0.048	ug/L		10/06/24 12:09	10/08/24 10:03	1
gamma-BHC (Lindane)	<0.0097		0.0097	ug/L		10/06/24 12:09	10/08/24 10:03	1
gamma-Chlordane	<0.048		0.048	ug/L		10/06/24 12:09	10/08/24 10:03	1
Heptachlor	<0.0097		0.0097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Heptachlor epoxide (isomer B)	<0.0097		0.0097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Hexachlorobenzene	<0.048		0.048	ug/L		10/06/24 12:09	10/08/24 10:03	1
Hexachlorocyclopentadiene	<0.048		0.048	ug/L		10/06/24 12:09	10/08/24 10:03	1
Indeno[1,2,3-cd]pyrene	<0.048		0.048	ug/L		10/06/24 12:09	10/08/24 10:03	1
Isophorone	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Malathion	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Methoxychlor	<0.048		0.048	ug/L		10/06/24 12:09	10/08/24 10:03	1
Metolachlor	<0.048		0.048	ug/L		10/06/24 12:09	10/08/24 10:03	1
Molinate	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Naphthalene	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Parathion	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Pendimethalin (Penoxaline)	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Phenanthrene	<0.039		0.039	ug/L		10/06/24 12:09	10/08/24 10:03	1
Propachlor	<0.048		0.048	ug/L		10/06/24 12:09	10/08/24 10:03	1
Pyrene	<0.048		0.048	ug/L		10/06/24 12:09	10/08/24 10:03	1
Simazine	<0.048		0.048	ug/L		10/06/24 12:09	10/08/24 10:03	1
Terbacil	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Terbutylazine	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
Thiobencarb	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1

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# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: MB 380-111994/21-A**  
**Matrix: Water**  
**Analysis Batch: 112221**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 111994**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		10/06/24 12:09	10/08/24 10:03	1
trans-Nonachlor	<0.048		0.048	ug/L		10/06/24 12:09	10/08/24 10:03	1
Trifluralin	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
1-Methylnaphthalene	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	1
2-Methylnaphthalene	<0.097		0.097	ug/L		10/06/24 12:09	10/08/24 10:03	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	10/06/24 12:09	10/08/24 10:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	96		70 - 130	10/06/24 12:09	10/08/24 10:03	1
Perylene-d12	88		70 - 130	10/06/24 12:09	10/08/24 10:03	1
Triphenylphosphate	105		70 - 130	10/06/24 12:09	10/08/24 10:03	1

**Lab Sample ID: LCS 380-111994/23-A**  
**Matrix: Water**  
**Analysis Batch: 112094**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 111994**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,4'-DDD	1.95	2.01		ug/L		103	70 - 130
2,4'-DDE	1.95	2.07		ug/L		106	70 - 130
2,4'-DDT	1.95	1.82		ug/L		94	70 - 130
2,4-Dinitrotoluene	1.95	1.90		ug/L		98	70 - 130
2,6-Dinitrotoluene	1.95	1.89		ug/L		97	70 - 130
4,4'-DDD	1.95	2.01		ug/L		103	70 - 130
4,4'-DDE	1.95	2.03		ug/L		104	70 - 130
4,4'-DDT	1.95	1.83		ug/L		94	70 - 130
Acenaphthene	1.95	1.95		ug/L		100	70 - 130
Acenaphthylene	1.95	1.77		ug/L		91	70 - 130
Acetochlor	1.95	2.06		ug/L		106	70 - 130
Alachlor	1.95	2.07		ug/L		106	70 - 130
alpha-BHC	1.95	2.00		ug/L		103	70 - 130
alpha-Chlordane	1.95	2.13		ug/L		109	70 - 130
Anthracene	1.95	1.60		ug/L		82	70 - 130
Atrazine	1.95	1.94		ug/L		100	70 - 130
Benz(a)anthracene	1.95	1.80		ug/L		92	70 - 130
Benzo[a]pyrene	1.95	1.58		ug/L		81	70 - 130
Benzo[b]fluoranthene	1.95	1.83		ug/L		94	70 - 130
Benzo[g,h,i]perylene	1.95	1.83		ug/L		94	70 - 130
Benzo[k]fluoranthene	1.95	1.91		ug/L		98	70 - 130
beta-BHC	1.95	2.07		ug/L		106	70 - 130
Bis(2-ethylhexyl) phthalate	1.95	1.77		ug/L		91	70 - 130
Aldrin	1.95	1.53		ug/L		79	70 - 130
Bromacil	1.95	1.86		ug/L		96	70 - 130
Butachlor	1.95	1.88		ug/L		96	70 - 130
Butylbenzylphthalate	1.95	1.92		ug/L		99	70 - 130
Chlorobenzilate	1.95	1.41		ug/L		72	70 - 130
Chloroneb	1.95	1.88		ug/L		97	70 - 130

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: LCS 380-111994/23-A**  
**Matrix: Water**  
**Analysis Batch: 112094**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 111994**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorothalonil (Draconil, Bravo)	1.95	2.03		ug/L		105	70 - 130
Chlorpyrifos	1.95	2.12		ug/L		109	70 - 130
Chrysene	1.95	2.00		ug/L		103	70 - 130
delta-BHC	1.95	2.04		ug/L		105	70 - 130
Di(2-ethylhexyl)adipate	1.95	1.73		ug/L		89	70 - 130
Dibenz(a,h)anthracene	1.95	1.78		ug/L		91	70 - 130
Diclorvos (DDVP)	1.95	1.78		ug/L		92	70 - 130
Dieldrin	1.95	1.89		ug/L		97	70 - 130
Diethylphthalate	1.95	2.02		ug/L		104	70 - 130
Dimethylphthalate	1.95	1.92		ug/L		99	70 - 130
Di-n-butyl phthalate	3.89	3.98		ug/L		102	70 - 130
Di-n-octyl phthalate	1.95	1.72		ug/L		88	70 - 130
Endosulfan I (Alpha)	1.95	1.96		ug/L		101	70 - 130
Endosulfan II (Beta)	1.95	1.86		ug/L		96	70 - 130
Endosulfan sulfate	1.95	1.85		ug/L		95	70 - 130
Endrin	1.95	2.10		ug/L		108	70 - 130
Endrin aldehyde	1.95	1.81		ug/L		93	60 - 130
EPTC	1.95	1.95		ug/L		100	70 - 130
Fluoranthene	1.95	1.99		ug/L		102	70 - 130
Fluorene	1.95	1.96		ug/L		101	70 - 130
gamma-BHC (Lindane)	1.95	1.97		ug/L		101	70 - 130
gamma-Chlordane	1.95	2.10		ug/L		108	70 - 130
Heptachlor	1.95	1.99		ug/L		102	70 - 130
Heptachlor epoxide (isomer B)	1.95	1.98		ug/L		102	70 - 130
Hexachlorobenzene	1.95	1.95		ug/L		100	70 - 130
Hexachlorocyclopentadiene	1.95	1.92		ug/L		99	70 - 130
Indeno[1,2,3-cd]pyrene	1.95	1.53		ug/L		78	70 - 130
Isophorone	1.95	1.83		ug/L		94	70 - 130
Malathion	1.95	1.98		ug/L		101	70 - 130
Methoxychlor	1.95	1.69		ug/L		87	70 - 130
Metolachlor	1.95	2.15		ug/L		111	70 - 130
Molinate	1.95	1.97		ug/L		101	70 - 130
Naphthalene	1.95	1.82		ug/L		94	70 - 130
Parathion	1.95	2.21		ug/L		113	70 - 130
Pendimethalin (Penoxaline)	1.95	1.72		ug/L		88	70 - 130
Phenanthrene	1.95	1.83		ug/L		94	70 - 130
Propachlor	1.95	1.99		ug/L		102	70 - 130
Pyrene	1.95	1.97		ug/L		101	70 - 130
Simazine	1.95	2.03		ug/L		104	70 - 130
Terbacil	1.95	2.13		ug/L		110	70 - 130
Terbutylazine	1.95	2.10		ug/L		108	70 - 130
Thiobencarb	1.95	1.99		ug/L		102	70 - 130
trans-Nonachlor	1.95	2.07		ug/L		107	70 - 130
Trifluralin	1.95	1.62		ug/L		83	70 - 130
1-Methylnaphthalene	1.95	1.88		ug/L		97	70 - 130
2-Methylnaphthalene	1.95	1.84		ug/L		95	70 - 130

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: LCS 380-111994/23-A**  
**Matrix: Water**  
**Analysis Batch: 112094**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 111994**

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	97		70 - 130
Perylene-d12	84		70 - 130
Triphenylphosphate	103		70 - 130

**Lab Sample ID: LCSD 380-111994/24-A**  
**Matrix: Water**  
**Analysis Batch: 112094**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 111994**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4'-DDD	1.95	2.00		ug/L		103	70 - 130	0	20
2,4'-DDE	1.95	1.97		ug/L		101	70 - 130	5	20
2,4'-DDT	1.95	1.69		ug/L		87	70 - 130	7	20
2,4-Dinitrotoluene	1.95	1.99		ug/L		102	70 - 130	4	20
2,6-Dinitrotoluene	1.95	2.00		ug/L		102	70 - 130	6	20
4,4'-DDD	1.95	1.97		ug/L		101	70 - 130	2	20
4,4'-DDE	1.95	1.84		ug/L		95	70 - 130	10	20
4,4'-DDT	1.95	1.68		ug/L		86	70 - 130	8	20
Acenaphthene	1.95	1.98		ug/L		101	70 - 130	2	20
Acenaphthylene	1.95	1.78		ug/L		91	70 - 130	0	20
Acetochlor	1.95	2.10		ug/L		108	70 - 130	2	20
Alachlor	1.95	2.12		ug/L		109	70 - 130	2	20
alpha-BHC	1.95	2.03		ug/L		104	70 - 130	1	20
alpha-Chlordane	1.95	2.13		ug/L		109	70 - 130	0	20
Anthracene	1.95	1.62		ug/L		83	70 - 130	1	20
Atrazine	1.95	1.93		ug/L		99	70 - 130	0	20
Benz(a)anthracene	1.95	1.77		ug/L		91	70 - 130	2	20
Benzo[a]pyrene	1.95	1.71		ug/L		88	70 - 130	8	20
Benzo[b]fluoranthene	1.95	2.03		ug/L		104	70 - 130	10	20
Benzo[g,h,i]perylene	1.95	1.64		ug/L		84	70 - 130	11	20
Benzo[k]fluoranthene	1.95	2.01		ug/L		103	70 - 130	5	20
beta-BHC	1.95	2.06		ug/L		106	70 - 130	0	20
Bis(2-ethylhexyl) phthalate	1.95	1.62		ug/L		83	70 - 130	9	20
Aldrin	1.95	1.56		ug/L		80	70 - 130	2	20
Bromacil	1.95	1.95		ug/L		100	70 - 130	4	20
Butachlor	1.95	1.93		ug/L		99	70 - 130	3	20
Butylbenzylphthalate	1.95	1.95		ug/L		100	70 - 130	2	20
Chlorobenzilate	1.95	1.89	*1	ug/L		97	70 - 130	29	20
Chloroneb	1.95	1.92		ug/L		99	70 - 130	2	20
Chlorothalonil (Draconil, Bravo)	1.95	2.08		ug/L		107	70 - 130	2	20
Chlorpyrifos	1.95	2.12		ug/L		109	70 - 130	0	20
Chrysene	1.95	2.22		ug/L		114	70 - 130	11	20
delta-BHC	1.95	2.06		ug/L		106	70 - 130	1	20
Di(2-ethylhexyl)adipate	1.95	1.37	*1	ug/L		70	70 - 130	23	20
Dibenz(a,h)anthracene	1.95	1.52		ug/L		78	70 - 130	16	20
Diclorvos (DDVP)	1.95	1.83		ug/L		94	70 - 130	2	20
Dieldrin	1.95	1.98		ug/L		102	70 - 130	5	20
Diethylphthalate	1.95	2.05		ug/L		105	70 - 130	2	20
Dimethylphthalate	1.95	1.95		ug/L		100	70 - 130	2	20

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: LCSD 380-111994/24-A**  
**Matrix: Water**  
**Analysis Batch: 112094**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 111994**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Di-n-butyl phthalate	3.89	3.99		ug/L		102	70 - 130	0	20
Di-n-octyl phthalate	1.95	1.46		ug/L		75	70 - 130	16	20
Endosulfan I (Alpha)	1.95	1.99		ug/L		102	70 - 130	2	20
Endosulfan II (Beta)	1.95	1.94		ug/L		100	70 - 130	4	20
Endosulfan sulfate	1.95	1.89		ug/L		97	70 - 130	2	20
Endrin	1.95	2.11		ug/L		109	70 - 130	1	20
Endrin aldehyde	1.95	1.84		ug/L		95	60 - 130	2	20
EPTC	1.95	1.97		ug/L		101	70 - 130	1	20
Fluoranthene	1.95	2.05		ug/L		106	70 - 130	3	20
Fluorene	1.95	1.99		ug/L		102	70 - 130	2	20
gamma-BHC (Lindane)	1.95	1.95		ug/L		100	70 - 130	1	20
gamma-Chlordane	1.95	2.05		ug/L		105	70 - 130	2	20
Heptachlor	1.95	1.99		ug/L		102	70 - 130	0	20
Heptachlor epoxide (isomer B)	1.95	2.00		ug/L		103	70 - 130	1	20
Hexachlorobenzene	1.95	1.96		ug/L		101	70 - 130	1	20
Hexachlorocyclopentadiene	1.95	1.94		ug/L		100	70 - 130	1	20
Indeno[1,2,3-cd]pyrene	1.95	1.41		ug/L		72	70 - 130	8	20
Isophorone	1.95	1.86		ug/L		95	70 - 130	1	20
Malathion	1.95	2.05		ug/L		105	70 - 130	4	20
Methoxychlor	1.95	2.10	*1	ug/L		108	70 - 130	21	20
Metolachlor	1.95	2.19		ug/L		113	70 - 130	2	20
Molinate	1.95	1.97		ug/L		101	70 - 130	0	20
Naphthalene	1.95	1.86		ug/L		96	70 - 130	2	20
Parathion	1.95	2.28		ug/L		117	70 - 130	3	20
Pendimethalin (Penoxaline)	1.95	1.78		ug/L		91	70 - 130	3	20
Phenanthrene	1.95	1.89		ug/L		97	70 - 130	3	20
Propachlor	1.95	2.03		ug/L		104	70 - 130	2	20
Pyrene	1.95	2.02		ug/L		104	70 - 130	2	20
Simazine	1.95	2.02		ug/L		104	70 - 130	1	20
Terbacil	1.95	2.20		ug/L		113	70 - 130	3	20
Terbutylazine	1.95	2.12		ug/L		109	70 - 130	1	20
Thiobencarb	1.95	2.04		ug/L		105	70 - 130	2	20
trans-Nonachlor	1.95	2.00		ug/L		103	70 - 130	4	20
Trifluralin	1.95	1.70		ug/L		87	70 - 130	5	20
1-Methylnaphthalene	1.95	1.93		ug/L		99	70 - 130	3	20
2-Methylnaphthalene	1.95	1.87		ug/L		96	70 - 130	1	20

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	97		70 - 130
Perylene-d12	75		70 - 130
Triphenylphosphate	103		70 - 130

**Lab Sample ID: MRL 380-111994/22-A**  
**Matrix: Water**  
**Analysis Batch: 112094**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 111994**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	0.0975	0.0902	J	ug/L		93	50 - 150

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# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: MRL 380-111994/22-A**  
**Matrix: Water**  
**Analysis Batch: 112094**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 111994**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDE	0.0975	0.0995		ug/L		102	50 - 150
2,4'-DDT	0.0975	0.0965	J	ug/L		99	50 - 150
2,4-Dinitrotoluene	0.0975	0.107		ug/L		110	50 - 150
2,6-Dinitrotoluene	0.0975	0.109		ug/L		112	50 - 150
4,4'-DDD	0.0975	0.0972		ug/L		100	50 - 150
4,4'-DDE	0.0975	0.0991		ug/L		102	50 - 150
4,4'-DDT	0.0975	0.0958	J	ug/L		98	50 - 150
Acenaphthene	0.0975	0.0967	J	ug/L		99	50 - 150
Acenaphthylene	0.0975	0.0819	J	ug/L		84	50 - 150
Acetochlor	0.0975	0.110		ug/L		113	50 - 150
Alachlor	0.0487	0.0510		ug/L		105	50 - 150
alpha-BHC	0.0975	0.105		ug/L		108	50 - 150
alpha-Chlordane	0.0244	<0.028		ug/L		101	50 - 150
Anthracene	0.0195	0.0195		ug/L		100	50 - 150
Atrazine	0.0487	0.0509		ug/L		104	50 - 150
Benz(a)anthracene	0.0487	0.0482	J	ug/L		99	50 - 150
Benzo[a]pyrene	0.0195	0.0155	J	ug/L		80	50 - 150
Benzo[b]fluoranthene	0.0195	0.0169	J	ug/L		87	50 - 150
Benzo[g,h,i]perylene	0.0487	0.0339	J	ug/L		70	50 - 150
Benzo[k]fluoranthene	0.0195	0.0177	J	ug/L		91	50 - 150
beta-BHC	0.0975	0.110		ug/L		113	50 - 150
Bis(2-ethylhexyl) phthalate	0.585	0.514	J	ug/L		88	50 - 150
Aldrin	0.00975	<0.0097		ug/L		87	50 - 150
Bromacil	0.0975	0.0969	J	ug/L		99	50 - 150
Butachlor	0.0487	0.0599		ug/L		123	50 - 150
Butylbenzylphthalate	0.487	0.465	J	ug/L		95	50 - 150
Chlorobenzilate	0.0975	0.0849	J	ug/L		87	50 - 150
Chloroneb	0.0975	0.0834	J	ug/L		86	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0975	0.106		ug/L		109	50 - 150
Chlorpyrifos	0.0487	0.0507		ug/L		104	50 - 150
Chrysene	0.0195	0.0216		ug/L		111	50 - 150
delta-BHC	0.0975	0.109		ug/L		112	50 - 150
Di(2-ethylhexyl)adipate	0.585	0.505	J	ug/L		86	50 - 150
Dibenz(a,h)anthracene	0.0487	0.0342	J	ug/L		70	50 - 150
Diclorvos (DDVP)	0.0487	0.0493		ug/L		101	50 - 150
Dieldrin	0.00975	0.0128		ug/L		132	50 - 150
Diethylphthalate	0.487	0.503		ug/L		103	50 - 150
Dimethylphthalate	0.487	0.488	J	ug/L		100	50 - 150
Di-n-butyl phthalate	0.487	0.475	J	ug/L		97	49 - 243
Di-n-octyl phthalate	0.0975	0.0644	J	ug/L		66	50 - 150
Endosulfan I (Alpha)	0.0975	0.0887	J	ug/L		91	50 - 150
Endosulfan II (Beta)	0.0975	0.111		ug/L		114	50 - 150
Endosulfan sulfate	0.0975	0.0938	J	ug/L		96	50 - 150
Endrin	0.00975	0.0110		ug/L		112	50 - 150
Endrin aldehyde	0.0975	0.0889	J	ug/L		91	50 - 150
EPTC	0.0975	0.0910	J	ug/L		93	50 - 150
Fluoranthene	0.0975	0.0931	J	ug/L		96	50 - 150
Fluorene	0.0487	0.0505		ug/L		104	50 - 150
gamma-BHC (Lindane)	0.00975	0.0141		ug/L		144	50 - 150

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# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: MRL 380-111994/22-A**  
**Matrix: Water**  
**Analysis Batch: 112094**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 111994**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
gamma-Chlordane	0.0244	0.0241	J	ug/L		99	50 - 150
Heptachlor	0.00975	0.0114		ug/L		117	50 - 150
Heptachlor epoxide (isomer B)	0.00975	0.0140		ug/L		144	50 - 150
Hexachlorobenzene	0.0487	0.0487	J	ug/L		100	50 - 150
Hexachlorocyclopentadiene	0.0487	0.0463	J	ug/L		95	50 - 150
Indeno[1,2,3-cd]pyrene	0.0487	0.0269	J	ug/L		55	50 - 150
Isophorone	0.0975	0.110		ug/L		112	50 - 150
Malathion	0.0975	0.105		ug/L		107	50 - 150
Methoxychlor	0.0487	0.0585		ug/L		120	50 - 150
Metolachlor	0.0487	0.0537		ug/L		110	50 - 150
Molinate	0.0975	0.0959	J	ug/L		98	50 - 150
Naphthalene	0.0975	0.103		ug/L		105	50 - 150
Parathion	0.0975	0.101		ug/L		104	50 - 150
Pendimethalin (Penoxaline)	0.0975	0.0791	J	ug/L		81	50 - 150
Phenanthrene	0.0390	0.0418		ug/L		107	50 - 150
Propachlor	0.0487	0.0528		ug/L		108	50 - 150
Pyrene	0.0487	0.0454	J	ug/L		93	50 - 150
Simazine	0.0487	0.0461	J	ug/L		95	50 - 150
Terbacil	0.0975	0.104		ug/L		107	50 - 150
Terbutylazine	0.0975	0.0992		ug/L		102	50 - 150
Thiobencarb	0.0975	0.0931	J	ug/L		95	50 - 150
trans-Nonachlor	0.0244	<0.025		ug/L		90	50 - 150
Trifluralin	0.0975	0.0873	J	ug/L		90	50 - 150
1-Methylnaphthalene	0.0975	0.102		ug/L		105	50 - 150
2-Methylnaphthalene	0.0975	0.0960	J	ug/L		98	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	96		70 - 130
Perylene-d12	73		70 - 130
Triphenylphosphate	99		70 - 130

**Lab Sample ID: 380-115709-1 MS**  
**Matrix: Drinking Water**  
**Analysis Batch: 112094**

**Client Sample ID: AIEA GULCH WELLS PUMP 2 (331-202-TP072)**  
**Prep Type: Total/NA**  
**Prep Batch: 111994**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	<0.097		1.96	2.11		ug/L		107	70 - 130
2,4'-DDE	<0.097		1.96	2.14		ug/L		109	70 - 130
2,4'-DDT	<0.097		1.96	2.00		ug/L		102	70 - 130
2,4-Dinitrotoluene	<0.097		1.96	2.14		ug/L		109	70 - 130
2,6-Dinitrotoluene	<0.097		1.96	2.09		ug/L		106	70 - 130
4,4'-DDD	<0.097		1.96	2.08		ug/L		106	70 - 130
4,4'-DDE	<0.097		1.96	2.12		ug/L		108	70 - 130
4,4'-DDT	<0.097		1.96	2.02		ug/L		103	70 - 130
Acenaphthene	<0.097		1.96	2.00		ug/L		102	70 - 130
Acenaphthylene	<0.097		1.96	1.83		ug/L		93	70 - 130
Acetochlor	<0.097		1.96	2.13		ug/L		109	70 - 130
Alachlor	<0.049		1.96	2.14		ug/L		109	70 - 130

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# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: 380-115709-1 MS**

**Client Sample ID: AIEA GULCH WELLS PUMP 2 (331-202-TP072)**

**Matrix: Drinking Water**

**Prep Type: Total/NA**

**Analysis Batch: 112094**

**Prep Batch: 111994**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				
alpha-BHC	<0.097		1.96	2.04		ug/L		104	70 - 130
alpha-Chlordane	<0.049		1.96	2.23		ug/L		114	70 - 130
Anthracene	<0.019	F1	1.96	1.13	F1	ug/L		58	70 - 130
Atrazine	<0.049		1.96	2.01		ug/L		103	70 - 130
Benz(a)anthracene	<0.049		1.96	1.82		ug/L		93	70 - 130
Benzo[a]pyrene	<0.019		1.96	1.52		ug/L		77	70 - 130
Benzo[b]fluoranthene	<0.019		1.96	1.95		ug/L		99	70 - 130
Benzo[g,h,i]perylene	<0.049		1.96	1.92		ug/L		98	70 - 130
Benzo[k]fluoranthene	<0.019		1.96	2.00		ug/L		102	70 - 130
beta-BHC	<0.097		1.96	2.12		ug/L		108	70 - 130
Bis(2-ethylhexyl) phthalate	<0.58		1.96	1.74		ug/L		88	70 - 130
Aldrin	<0.0097		1.96	1.61		ug/L		82	70 - 130
Bromacil	<0.097		1.96	2.05		ug/L		104	70 - 130
Butachlor	<0.049		1.96	1.96		ug/L		100	70 - 130
Butylbenzylphthalate	<0.49		1.96	1.96		ug/L		100	70 - 130
Chlorobenzilate	<0.097	*1	1.96	1.85		ug/L		95	70 - 130
Chloroneb	<0.097		1.96	1.97		ug/L		100	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.097		1.96	2.12		ug/L		108	70 - 130
Chlorpyrifos	<0.049		1.96	2.16		ug/L		110	70 - 130
Chrysene	<0.019		1.96	2.03		ug/L		104	70 - 130
delta-BHC	<0.097		1.96	2.12		ug/L		108	70 - 130
Di(2-ethylhexyl)adipate	<0.58	*1	1.96	1.78		ug/L		91	70 - 130
Dibenz(a,h)anthracene	<0.049		1.96	1.88		ug/L		96	70 - 130
Diclorvos (DDVP)	<0.049		1.96	1.88		ug/L		96	70 - 130
Dieldrin	<0.0097		1.96	2.01		ug/L		103	70 - 130
Diethylphthalate	<0.49		1.96	2.06		ug/L		105	70 - 130
Dimethylphthalate	<0.49		1.96	1.97		ug/L		100	70 - 130
Di-n-butyl phthalate	<0.97		3.92	4.01		ug/L		102	70 - 130
Di-n-octyl phthalate	<0.097		1.96	1.70		ug/L		87	70 - 130
Endosulfan I (Alpha)	<0.097		1.96	2.01		ug/L		103	70 - 130
Endosulfan II (Beta)	<0.097		1.96	1.98		ug/L		101	70 - 130
Endosulfan sulfate	<0.097		1.96	2.01		ug/L		102	70 - 130
Endrin	<0.0097		1.96	2.14		ug/L		109	70 - 130
Endrin aldehyde	<0.097		1.96	1.80		ug/L		92	60 - 130
EPTC	<0.097		1.96	1.99		ug/L		101	70 - 130
Fluoranthene	<0.097		1.96	2.08		ug/L		106	70 - 130
Fluorene	<0.049		1.96	2.02		ug/L		103	70 - 130
gamma-BHC (Lindane)	<0.0097		1.96	2.01		ug/L		103	70 - 130
gamma-Chlordane	<0.049		1.96	2.22		ug/L		113	70 - 130
Heptachlor	<0.0097		1.96	2.03		ug/L		104	70 - 130
Heptachlor epoxide (isomer B)	<0.0097		1.96	2.08		ug/L		106	70 - 130
Hexachlorobenzene	<0.049		1.96	2.04		ug/L		104	70 - 130
Hexachlorocyclopentadiene	<0.049		1.96	2.05		ug/L		105	70 - 130
Indeno[1,2,3-cd]pyrene	<0.049		1.96	1.74		ug/L		89	70 - 130
Isophorone	<0.097		1.96	1.85		ug/L		95	70 - 130
Malathion	<0.097		1.96	2.09		ug/L		106	70 - 130
Methoxychlor	<0.049	*1	1.96	1.88		ug/L		96	70 - 130
Metolachlor	<0.049		1.96	2.23		ug/L		114	70 - 130
Molinate	<0.097		1.96	2.00		ug/L		102	70 - 130

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# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: 380-115709-1 MSD**

**Client Sample ID: AIEA GULCH WELLS PUMP 2 (331-202-TP072)**

**Matrix: Drinking Water**

**Prep Type: Total/NA**

**Analysis Batch: 112094**

**Prep Batch: 111994**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		
Aldrin	<0.0097		1.96	1.65		ug/L		84	70 - 130	3	20
Bromacil	<0.097		1.96	1.99		ug/L		102	70 - 130	3	20
Butachlor	<0.049		1.96	1.96		ug/L		100	70 - 130	0	20
Butylbenzylphthalate	<0.49		1.96	1.97		ug/L		100	70 - 130	0	20
Chlorobenzilate	<0.097	*1	1.96	1.90		ug/L		97	70 - 130	2	20
Chloroneb	<0.097		1.96	1.96		ug/L		100	70 - 130	1	20
Chlorothalonil (Draconil, Bravo)	<0.097		1.96	2.08		ug/L		106	70 - 130	2	20
Chlorpyrifos	<0.049		1.96	2.17		ug/L		111	70 - 130	0	20
Chrysene	<0.019		1.96	2.04		ug/L		104	70 - 130	1	20
delta-BHC	<0.097		1.96	2.07		ug/L		106	70 - 130	2	20
Di(2-ethylhexyl)adipate	<0.58	*1	1.96	1.69		ug/L		86	70 - 130	5	20
Dibenz(a,h)anthracene	<0.049		1.96	1.86		ug/L		95	70 - 130	1	20
Diclorvos (DDVP)	<0.049		1.96	1.89		ug/L		96	70 - 130	1	20
Dieldrin	<0.0097		1.96	2.02		ug/L		103	70 - 130	0	20
Diethylphthalate	<0.49		1.96	2.07		ug/L		106	70 - 130	0	20
Dimethylphthalate	<0.49		1.96	1.97		ug/L		101	70 - 130	0	20
Di-n-butyl phthalate	<0.97		3.92	4.03		ug/L		103	70 - 130	1	20
Di-n-octyl phthalate	<0.097		1.96	1.55		ug/L		79	70 - 130	10	20
Endosulfan I (Alpha)	<0.097		1.96	2.04		ug/L		104	70 - 130	1	20
Endosulfan II (Beta)	<0.097		1.96	2.00		ug/L		102	70 - 130	1	20
Endosulfan sulfate	<0.097		1.96	1.99		ug/L		101	70 - 130	1	20
Endrin	<0.0097		1.96	2.15		ug/L		110	70 - 130	0	20
Endrin aldehyde	<0.097		1.96	1.75		ug/L		89	60 - 130	3	20
EPTC	<0.097		1.96	1.98		ug/L		101	70 - 130	1	20
Fluoranthene	<0.097		1.96	2.05		ug/L		105	70 - 130	1	20
Fluorene	<0.049		1.96	2.03		ug/L		103	70 - 130	1	20
gamma-BHC (Lindane)	<0.0097		1.96	2.00		ug/L		102	70 - 130	0	20
gamma-Chlordane	<0.049		1.96	2.18		ug/L		111	70 - 130	2	20
Heptachlor	<0.0097		1.96	2.01		ug/L		102	70 - 130	1	20
Heptachlor epoxide (isomer B)	<0.0097		1.96	2.04		ug/L		104	70 - 130	2	20
Hexachlorobenzene	<0.049		1.96	2.04		ug/L		104	70 - 130	0	20
Hexachlorocyclopentadiene	<0.049		1.96	2.07		ug/L		106	70 - 130	1	20
Indeno[1,2,3-cd]pyrene	<0.049		1.96	1.71		ug/L		87	70 - 130	2	20
Isophorone	<0.097		1.96	1.87		ug/L		96	70 - 130	1	20
Malathion	<0.097		1.96	2.06		ug/L		105	70 - 130	1	20
Methoxychlor	<0.049	*1	1.96	1.88		ug/L		96	70 - 130	0	20
Metolachlor	<0.049		1.96	2.21		ug/L		113	70 - 130	1	20
Molinate	<0.097		1.96	1.99		ug/L		102	70 - 130	0	20
Naphthalene	<0.097		1.96	1.87		ug/L		95	70 - 130	1	20
Parathion	<0.097		1.96	2.42		ug/L		123	70 - 130	1	20
Pendimethalin (Penoxaline)	<0.097		1.96	1.96		ug/L		100	70 - 130	2	20
Phenanthrene	<0.039		1.96	1.88		ug/L		96	70 - 130	0	20
Propachlor	<0.049		1.96	2.02		ug/L		103	70 - 130	1	20
Pyrene	<0.049		1.96	2.01		ug/L		103	70 - 130	0	20
Simazine	<0.049		1.96	2.10		ug/L		107	70 - 130	0	20
Terbacil	<0.097		1.96	2.28		ug/L		117	70 - 130	2	20
Terbutylazine	<0.097		1.96	2.17		ug/L		111	70 - 130	1	20
Thiobencarb	<0.097		1.96	2.01		ug/L		103	70 - 130	1	20
trans-Nonachlor	<0.049		1.96	2.16		ug/L		110	70 - 130	3	20

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

Lab Sample ID: 380-115709-1 MSD

Client Sample ID: AIEA GULCH WELLS PUMP 2 (331-202-TP072)

Matrix: Drinking Water

Prep Type: Total/NA

Analysis Batch: 112094

Prep Batch: 111994

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Trifluralin	<0.097		1.96	1.81		ug/L		93	70 - 130	1	20
1-Methylnaphthalene	<0.097		1.96	1.93		ug/L		98	70 - 130	0	20
2-Methylnaphthalene	<0.097		1.96	1.89		ug/L		96	70 - 130	0	20

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
2-Nitro-m-xylene	96		70 - 130
Perylene-d12	89		70 - 130
Triphenylphosphate	103		70 - 130

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

Lab Sample ID: MB 570-487444/1-A

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 491128

Prep Batch: 487444

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	10/03/24 09:59	10/14/24 11:03	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	79		33 - 139	10/03/24 09:59	10/14/24 11:03	1
2-Fluorobiphenyl (Surr)	75		33 - 126	10/03/24 09:59	10/14/24 11:03	1
2-Fluorophenol (Surr)	60		12 - 120	10/03/24 09:59	10/14/24 11:03	1
Nitrobenzene-d5 (Surr)	83		36 - 120	10/03/24 09:59	10/14/24 11:03	1
Phenol-d6 (Surr)	32		10 - 120	10/03/24 09:59	10/14/24 11:03	1
p-Terphenyl-d14 (Surr)	84		47 - 131	10/03/24 09:59	10/14/24 11:03	1

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

Lab Sample ID: MB 570-487444/1-A

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 487832

Prep Batch: 487444

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
2,4,5-Trichlorophenol	<5.0		5.0	ug/L		10/03/24 09:59	10/04/24 11:28	1
2,4,6-Trichlorophenol	<1.0		1.0	ug/L		10/03/24 09:59	10/04/24 11:28	1
2,4-Dichlorophenol	<1.0		1.0	ug/L		10/03/24 09:59	10/04/24 11:28	1
2,4-Dinitrophenol	<5.0		5.0	ug/L		10/03/24 09:59	10/04/24 11:28	1
2,6-Dichlorophenol	<5.0		5.0	ug/L		10/03/24 09:59	10/04/24 11:28	1
2-Chloronaphthalene	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
2-Chlorophenol	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
2-Methylnaphthalene	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
2-Methylphenol	<1.0		1.0	ug/L		10/03/24 09:59	10/04/24 11:28	1
2-Nitroaniline	<5.0		5.0	ug/L		10/03/24 09:59	10/04/24 11:28	1
2-Nitrophenol	<5.0		5.0	ug/L		10/03/24 09:59	10/04/24 11:28	1
3/4-Methylphenol	<2.0		2.0	ug/L		10/03/24 09:59	10/04/24 11:28	1
3-Nitroaniline	<5.0		5.0	ug/L		10/03/24 09:59	10/04/24 11:28	1
4,6-Dinitro-2-methylphenol	<5.0		5.0	ug/L		10/03/24 09:59	10/04/24 11:28	1

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: MB 570-487444/1-A**  
**Matrix: Water**  
**Analysis Batch: 487832**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 487444**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
4-Chloro-3-methylphenol	<1.0		1.0	ug/L		10/03/24 09:59	10/04/24 11:28	1
4-Chloroaniline	<5.0		5.0	ug/L		10/03/24 09:59	10/04/24 11:28	1
4-Chlorophenyl phenyl ether	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
4-Nitroaniline	<5.0		5.0	ug/L		10/03/24 09:59	10/04/24 11:28	1
4-Nitrophenol	<5.0		5.0	ug/L		10/03/24 09:59	10/04/24 11:28	1
Acenaphthene	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Acenaphthylene	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Aniline	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Anthracene	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Benzidine	<5.0		5.0	ug/L		10/03/24 09:59	10/04/24 11:28	1
Benzo[a]anthracene	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Benzo[a]pyrene	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Benzo[b]fluoranthene	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Benzo[g,h,i]perylene	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Benzo[k]fluoranthene	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Benzoic acid	<10		10	ug/L		10/03/24 09:59	10/04/24 11:28	1
Benzyl alcohol	<1.0		1.0	ug/L		10/03/24 09:59	10/04/24 11:28	1
Bis(2-chloroethoxy)methane	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Bis(2-chloroethyl)ether	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
bis (2-Chloroisopropyl) ether	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Chrysene	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Dibenz(a,h)anthracene	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Dibenzofuran	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Fluoranthene	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Fluorene	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Hexachloroethane	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Indeno[1,2,3-cd]pyrene	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Naphthalene	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Nitrobenzene	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
N-Nitrosodi-n-propylamine	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
N-Nitrosodiphenylamine	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Pentachlorophenol	<1.0		1.0	ug/L		10/03/24 09:59	10/04/24 11:28	1
Phenanthrene	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1
Phenol	<1.0		1.0	ug/L		10/03/24 09:59	10/04/24 11:28	1
Pyrene	<0.20		0.20	ug/L		10/03/24 09:59	10/04/24 11:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	84		28 - 127	10/03/24 09:59	10/04/24 11:28	1
2-Fluorobiphenyl (Surr)	48		31 - 120	10/03/24 09:59	10/04/24 11:28	1
2-Fluorophenol (Surr)	48		17 - 120	10/03/24 09:59	10/04/24 11:28	1
Nitrobenzene-d5 (Surr)	52		27 - 120	10/03/24 09:59	10/04/24 11:28	1
Phenol-d6 (Surr)	32		10 - 120	10/03/24 09:59	10/04/24 11:28	1
p-Terphenyl-d14 (Surr)	52		45 - 120	10/03/24 09:59	10/04/24 11:28	1

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: LCS 570-487444/2-A**  
**Matrix: Water**  
**Analysis Batch: 487832**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 487444**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	40.0	27.3		ug/L		68	47 - 120
2,4,5-Trichlorophenol	40.0	40.2		ug/L		101	57 - 120
2,4,6-Trichlorophenol	40.0	39.5		ug/L		99	52 - 129
2,4-Dichlorophenol	40.0	29.8		ug/L		75	53 - 122
2,4-Dinitrophenol	40.0	39.7		ug/L		99	1 - 173
2,6-Dichlorophenol	40.0	29.2		ug/L		73	50 - 120
2-Chloronaphthalene	40.0	35.3		ug/L		88	65 - 120
2-Chlorophenol	40.0	37.7		ug/L		94	36 - 120
2-Methylnaphthalene	40.0	27.0		ug/L		67	43 - 120
2-Methylphenol	40.0	39.3		ug/L		98	46 - 120
2-Nitroaniline	20.0	17.7		ug/L		89	51 - 125
2-Nitrophenol	40.0	27.3		ug/L		68	45 - 167
3/4-Methylphenol	80.0	75.1		ug/L		94	29 - 120
3-Nitroaniline	20.0	17.5		ug/L		88	62 - 129
4,6-Dinitro-2-methylphenol	40.0	44.2		ug/L		111	53 - 130
4-Bromophenyl phenyl ether	40.0	35.9		ug/L		90	65 - 120
4-Chloro-3-methylphenol	40.0	33.5		ug/L		84	41 - 128
4-Chloroaniline	20.0	11.6		ug/L		58	51 - 120
4-Chlorophenyl phenyl ether	40.0	37.7		ug/L		94	38 - 145
4-Nitroaniline	20.0	17.9		ug/L		90	64 - 129
4-Nitrophenol	40.0	24.0		ug/L		60	13 - 129
Acenaphthene	40.0	34.7		ug/L		87	60 - 132
Acenaphthylene	40.0	36.0		ug/L		90	54 - 126
Aniline	20.0	13.5		ug/L		67	52 - 121
Anthracene	40.0	38.9		ug/L		97	43 - 120
Benzidine	20.0	2.75	J *	ug/L		14	20 - 164
Benzo[a]anthracene	40.0	41.4		ug/L		104	42 - 133
Benzo[a]pyrene	40.0	44.5		ug/L		111	32 - 148
Benzo[b]fluoranthene	40.0	42.9		ug/L		107	42 - 140
Benzo[g,h,i]perylene	40.0	40.7		ug/L		102	1 - 195
Benzo[k]fluoranthene	40.0	41.7		ug/L		104	25 - 146
Benzoic acid	40.0	12.6		ug/L		31	20 - 120
Benzyl alcohol	40.0	39.7		ug/L		99	44 - 122
Bis(2-chloroethoxy)methane	40.0	28.1		ug/L		70	49 - 165
Bis(2-chloroethyl)ether	40.0	38.8		ug/L		97	43 - 126
bis (2-Chloroisopropyl) ether	40.0	39.1		ug/L		98	63 - 139
Chrysene	40.0	39.8		ug/L		99	44 - 140
Dibenz(a,h)anthracene	40.0	41.0		ug/L		102	1 - 200
Dibenzofuran	40.0	36.9		ug/L		92	48 - 120
Fluoranthene	40.0	41.2		ug/L		103	43 - 121
Fluorene	40.0	37.6		ug/L		94	70 - 120
Hexachloroethane	40.0	28.6		ug/L		72	55 - 120
Indeno[1,2,3-cd]pyrene	40.0	41.3		ug/L		103	1 - 151
Naphthalene	40.0	23.6		ug/L		59	36 - 120
Nitrobenzene	40.0	25.6		ug/L		64	54 - 158
N-Nitrosodi-n-propylamine	20.0	16.4		ug/L		82	14 - 198
N-Nitrosodiphenylamine	20.0	19.9		ug/L		100	65 - 133
Pentachlorophenol	40.0	47.1		ug/L		118	38 - 152

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: LCS 570-487444/2-A**  
**Matrix: Water**  
**Analysis Batch: 487832**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 487444**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phenanthrene	40.0	38.7		ug/L		97	65 - 120
Phenol	40.0	20.1		ug/L		50	17 - 120
Pyrene	40.0	39.1		ug/L		98	70 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	86		28 - 127
2-Fluorobiphenyl (Surr)	45		31 - 120
2-Fluorophenol (Surr)	51		17 - 120
Nitrobenzene-d5 (Surr)	34		27 - 120
Phenol-d6 (Surr)	39		10 - 120
p-Terphenyl-d14 (Surr)	59		45 - 120

**Lab Sample ID: LCSD 570-487444/3-A**  
**Matrix: Water**  
**Analysis Batch: 487832**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 487444**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	40.0	26.0		ug/L		65	47 - 120	5	20
2,4,5-Trichlorophenol	40.0	40.5		ug/L		101	57 - 120	1	20
2,4,6-Trichlorophenol	40.0	40.3		ug/L		101	52 - 129	2	35
2,4-Dichlorophenol	40.0	29.1		ug/L		73	53 - 122	2	30
2,4-Dinitrophenol	40.0	45.4		ug/L		114	1 - 173	13	79
2,6-Dichlorophenol	40.0	28.5		ug/L		71	50 - 120	2	20
2-Chloronaphthalene	40.0	36.0		ug/L		90	65 - 120	2	15
2-Chlorophenol	40.0	38.1		ug/L		95	36 - 120	1	37
2-Methylnaphthalene	40.0	26.0		ug/L		65	43 - 120	4	20
2-Methylphenol	40.0	37.6		ug/L		94	46 - 120	4	20
2-Nitroaniline	20.0	18.2		ug/L		91	51 - 125	2	20
2-Nitrophenol	40.0	27.0		ug/L		68	45 - 167	1	33
3/4-Methylphenol	80.0	72.1		ug/L		90	29 - 120	4	20
3-Nitroaniline	20.0	19.1		ug/L		95	62 - 129	9	20
4,6-Dinitro-2-methylphenol	40.0	46.2		ug/L		116	53 - 130	4	122
4-Bromophenyl phenyl ether	40.0	36.0		ug/L		90	65 - 120	0	26
4-Chloro-3-methylphenol	40.0	33.6		ug/L		84	41 - 128	0	44
4-Chloroaniline	20.0	11.6		ug/L		58	51 - 120	0	20
4-Chlorophenyl phenyl ether	40.0	38.5		ug/L		96	38 - 145	2	36
4-Nitroaniline	20.0	19.7		ug/L		99	64 - 129	9	20
4-Nitrophenol	40.0	24.6		ug/L		61	13 - 129	3	79
Acenaphthene	40.0	36.0		ug/L		90	60 - 132	4	29
Acenaphthylene	40.0	37.0		ug/L		93	54 - 126	3	45
Aniline	20.0	14.6		ug/L		73	52 - 121	8	21
Anthracene	40.0	39.9		ug/L		100	43 - 120	2	40
Benzidine	20.0	6.71	*1	ug/L		34	20 - 164	84	30
Benzo[a]anthracene	40.0	41.7		ug/L		104	42 - 133	1	32
Benzo[a]pyrene	40.0	45.4		ug/L		113	32 - 148	2	43
Benzo[b]fluoranthene	40.0	42.6		ug/L		107	42 - 140	1	43
Benzo[g,h,i]perylene	40.0	42.1		ug/L		105	1 - 195	3	61
Benzo[k]fluoranthene	40.0	42.6		ug/L		107	25 - 146	2	38



# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: LCSD 570-487444/3-A**  
**Matrix: Water**  
**Analysis Batch: 487832**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 487444**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Benzoic acid	40.0	14.5		ug/L		36	20 - 120	14	30	
Benzyl alcohol	40.0	37.7		ug/L		94	44 - 122	5	20	
Bis(2-chloroethoxy)methane	40.0	27.2		ug/L		68	49 - 165	3	32	
Bis(2-chloroethyl)ether	40.0	38.8		ug/L		97	43 - 126	0	65	
bis (2-Chloroisopropyl) ether	40.0	38.1		ug/L		95	63 - 139	3	46	
Chrysene	40.0	39.6		ug/L		99	44 - 140	0	53	
Dibenz(a,h)anthracene	40.0	42.4		ug/L		106	1 - 200	4	75	
Dibenzofuran	40.0	38.5		ug/L		96	48 - 120	4	20	
Fluoranthene	40.0	41.9		ug/L		105	43 - 121	2	40	
Fluorene	40.0	38.4		ug/L		96	70 - 120	2	23	
Hexachloroethane	40.0	29.7		ug/L		74	55 - 120	4	32	
Indeno[1,2,3-cd]pyrene	40.0	42.5		ug/L		106	1 - 151	3	60	
Naphthalene	40.0	23.4		ug/L		58	36 - 120	1	39	
Nitrobenzene	40.0	25.4		ug/L		63	54 - 158	1	37	
N-Nitrosodi-n-propylamine	20.0	16.3		ug/L		82	14 - 198	0	52	
N-Nitrosodiphenylamine	20.0	19.9		ug/L		100	65 - 133	0	20	
Pentachlorophenol	40.0	48.4		ug/L		121	38 - 152	3	52	
Phenanthrene	40.0	39.2		ug/L		98	65 - 120	1	24	
Phenol	40.0	19.6		ug/L		49	17 - 120	3	39	
Pyrene	40.0	38.7		ug/L		97	70 - 120	1	30	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	85		28 - 127
2-Fluorobiphenyl (Surr)	44		31 - 120
2-Fluorophenol (Surr)	50		17 - 120
Nitrobenzene-d5 (Surr)	33		27 - 120
Phenol-d6 (Surr)	37		10 - 120
p-Terphenyl-d14 (Surr)	57		45 - 120

**Lab Sample ID: 380-115753-A-3-A MS**  
**Matrix: Water**  
**Analysis Batch: 488403**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 487444**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec	
				Result	Qualifier				Limits	RPD
1-Methylnaphthalene	<0.19		38.2	20.7		ug/L		54	36 - 120	
2,4,5-Trichlorophenol	<4.8		38.2	31.6		ug/L		83	21 - 145	
2,4,6-Trichlorophenol	<0.96		38.2	30.0		ug/L		78	37 - 144	
2,4-Dichlorophenol	<0.96		38.2	23.5		ug/L		62	39 - 135	
2,4-Dinitrophenol	<4.8		38.2	32.6		ug/L		85	1 - 191	
2,6-Dichlorophenol	<4.8		38.2	22.9		ug/L		60	24 - 134	
2-Chloronaphthalene	<0.19		38.2	28.2		ug/L		74	60 - 120	
2-Chlorophenol	<0.19		38.2	30.1		ug/L		79	23 - 143	
2-Methylnaphthalene	<0.19		38.2	20.5		ug/L		54	32 - 124	
2-Methylphenol	<0.96		38.2	27.7		ug/L		72	10 - 135	
2-Nitroaniline	<4.8		19.1	13.2		ug/L		69	10 - 147	
2-Nitrophenol	<4.8		38.2	21.4		ug/L		56	29 - 182	
3/4-Methylphenol	<1.9		76.4	52.0		ug/L		68	10 - 118	
3-Nitroaniline	<4.8		19.1	15.5		ug/L		81	10 - 153	

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: 380-115753-A-3-A MS**  
**Matrix: Water**  
**Analysis Batch: 488403**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 487444**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
4,6-Dinitro-2-methylphenol	<4.8		38.2	30.2		ug/L		79	1 - 181
4-Bromophenyl phenyl ether	<0.19		38.2	27.5		ug/L		72	53 - 127
4-Chloro-3-methylphenol	<0.96		38.2	25.9		ug/L		68	22 - 147
4-Chloroaniline	<4.8		19.1	11.6		ug/L		61	10 - 131
4-Chlorophenyl phenyl ether	<0.19		38.2	28.5		ug/L		75	25 - 158
4-Nitroaniline	<4.8		19.1	13.8		ug/L		72	10 - 180
4-Nitrophenol	<4.8		38.2	17.7		ug/L		46	1 - 132
Acenaphthene	<0.19		38.2	27.6		ug/L		72	47 - 145
Acenaphthylene	<0.19		38.2	28.2		ug/L		74	33 - 145
Aniline	<0.19		19.1	11.4		ug/L		60	10 - 113
Anthracene	<0.19		38.2	30.8		ug/L		81	27 - 133
Benzidine	<4.8	F1 *1 *-	19.1	<4.8	F1	ug/L		7	10 - 57
Benzo[a]anthracene	<0.19		38.2	32.6		ug/L		85	33 - 143
Benzo[a]pyrene	<0.19		38.2	33.8		ug/L		89	17 - 163
Benzo[b]fluoranthene	<0.19		38.2	32.8		ug/L		86	24 - 159
Benzo[g,h,i]perylene	<0.19		38.2	33.3		ug/L		87	1 - 219
Benzo[k]fluoranthene	<0.19		38.2	32.7		ug/L		86	11 - 162
Benzoic acid	<9.6		38.2	12.1		ug/L		32	10 - 97
Benzyl alcohol	<0.96		38.2	30.2		ug/L		79	10 - 122
Bis(2-chloroethoxy)methane	<0.19		38.2	21.6		ug/L		56	33 - 184
Bis(2-chloroethyl)ether	<0.19		38.2	27.3		ug/L		71	12 - 158
bis (2-Chloroisopropyl) ether	<0.19		38.2	27.7		ug/L		73	36 - 166
Chrysene	<0.19		38.2	30.9		ug/L		81	17 - 168
Dibenz(a,h)anthracene	<0.19		38.2	33.5		ug/L		88	1 - 227
Dibenzofuran	<0.19		38.2	28.8		ug/L		75	42 - 111
Fluoranthene	<0.19		38.2	32.4		ug/L		85	26 - 137
Fluorene	<0.19		38.2	28.5		ug/L		75	59 - 121
Hexachloroethane	<0.19		38.2	22.8		ug/L		60	40 - 120
Indeno[1,2,3-cd]pyrene	<0.19		38.2	33.0		ug/L		86	1 - 171
Naphthalene	<0.19		38.2	19.8		ug/L		52	21 - 133
Nitrobenzene	<0.19		38.2	20.9		ug/L		55	35 - 180
N-Nitrosodi-n-propylamine	<0.19		19.1	10.9		ug/L		57	1 - 230
N-Nitrosodiphenylamine	<0.19		19.1	14.3		ug/L		75	10 - 179
Pentachlorophenol	<0.96		38.2	28.7		ug/L		75	14 - 176
Phenanthrene	<0.19		38.2	30.5		ug/L		80	54 - 120
Phenol	<0.96		38.2	13.8		ug/L		36	5 - 120
Pyrene	<0.19		38.2	31.8		ug/L		83	52 - 120

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	63		28 - 127
2-Fluorobiphenyl (Surr)	37		31 - 120
2-Fluorophenol (Surr)	42		17 - 120
Nitrobenzene-d5 (Surr)	29		27 - 120
Phenol-d6 (Surr)	27		10 - 120
p-Terphenyl-d14 (Surr)	48		45 - 120

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: 380-115753-A-3-B MSD**

**Matrix: Water**

**Analysis Batch: 488403**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 487444**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
1-Methylnaphthalene	<0.19		38.1	22.2		ug/L		58	36 - 120	7	30
2,4,5-Trichlorophenol	<4.8		38.1	32.8		ug/L		86	21 - 145	4	30
2,4,6-Trichlorophenol	<0.96		38.1	32.3		ug/L		85	37 - 144	7	58
2,4-Dichlorophenol	<0.96		38.1	25.1		ug/L		66	39 - 135	6	50
2,4-Dinitrophenol	<4.8		38.1	35.7		ug/L		94	1 - 191	9	132
2,6-Dichlorophenol	<4.8		38.1	24.5		ug/L		64	24 - 134	7	30
2-Chloronaphthalene	<0.19		38.1	30.4		ug/L		80	60 - 120	8	24
2-Chlorophenol	<0.19		38.1	32.4		ug/L		85	23 - 143	7	61
2-Methylnaphthalene	<0.19		38.1	22.1		ug/L		58	32 - 124	7	30
2-Methylphenol	<0.96		38.1	29.5		ug/L		77	10 - 135	6	30
2-Nitroaniline	<4.8		19.1	14.4		ug/L		75	10 - 147	9	30
2-Nitrophenol	<4.8		38.1	23.0		ug/L		60	29 - 182	8	55
3/4-Methylphenol	<1.9		76.3	55.3		ug/L		73	10 - 118	6	30
3-Nitroaniline	<4.8		19.1	15.0		ug/L		79	10 - 153	3	30
4,6-Dinitro-2-methylphenol	<4.8		38.1	33.4		ug/L		88	1 - 181	10	203
4-Bromophenyl phenyl ether	<0.19		38.1	29.3		ug/L		77	53 - 127	6	43
4-Chloro-3-methylphenol	<0.96		38.1	26.5		ug/L		69	22 - 147	2	73
4-Chloroaniline	<4.8		19.1	10.2		ug/L		53	10 - 131	13	30
4-Chlorophenyl phenyl ether	<0.19		38.1	30.4		ug/L		80	25 - 158	6	61
4-Nitroaniline	<4.8		19.1	14.5		ug/L		76	10 - 180	5	30
4-Nitrophenol	<4.8		38.1	18.2		ug/L		48	1 - 132	3	131
Acenaphthene	<0.19		38.1	29.1		ug/L		76	47 - 145	6	48
Acenaphthylene	<0.19		38.1	29.8		ug/L		78	33 - 145	6	74
Aniline	<0.19		19.1	9.63		ug/L		51	10 - 113	17	30
Anthracene	<0.19		38.1	32.3		ug/L		85	27 - 133	5	66
Benzidine	<4.8	F1 *1 *-	19.1	<4.8	F1	ug/L		0	10 - 57	NC	30
Benzo[a]anthracene	<0.19		38.1	34.1		ug/L		89	33 - 143	4	53
Benzo[a]pyrene	<0.19		38.1	35.3		ug/L		92	17 - 163	4	72
Benzo[b]fluoranthene	<0.19		38.1	33.5		ug/L		88	24 - 159	2	71
Benzo[g,h,i]perylene	<0.19		38.1	33.8		ug/L		89	1 - 219	1	97
Benzo[k]fluoranthene	<0.19		38.1	34.1		ug/L		89	11 - 162	4	63
Benzoic acid	<9.6		38.1	12.8		ug/L		34	10 - 97	5	30
Benzyl alcohol	<0.96		38.1	30.6		ug/L		80	10 - 122	1	30
Bis(2-chloroethoxy)methane	<0.19		38.1	23.0		ug/L		60	33 - 184	6	54
Bis(2-chloroethyl)ether	<0.19		38.1	30.0		ug/L		79	12 - 158	9	108
bis (2-Chloroisopropyl) ether	<0.19		38.1	30.5		ug/L		80	36 - 166	9	76
Chrysene	<0.19		38.1	32.1		ug/L		84	17 - 168	4	87
Dibenz(a,h)anthracene	<0.19		38.1	34.2		ug/L		90	1 - 227	2	126
Dibenzofuran	<0.19		38.1	30.7		ug/L		80	42 - 111	6	30
Fluoranthene	<0.19		38.1	34.3		ug/L		90	26 - 137	6	66
Fluorene	<0.19		38.1	30.6		ug/L		80	59 - 121	7	38
Hexachloroethane	<0.19		38.1	25.3		ug/L		66	40 - 120	10	52
Indeno[1,2,3-cd]pyrene	<0.19		38.1	33.7		ug/L		88	1 - 171	2	99
Naphthalene	<0.19		38.1	21.2		ug/L		56	21 - 133	7	65
Nitrobenzene	<0.19		38.1	22.5		ug/L		59	35 - 180	8	62
N-Nitrosodi-n-propylamine	<0.19		19.1	12.0		ug/L		63	1 - 230	10	87
N-Nitrosodiphenylamine	<0.19		19.1	15.7		ug/L		83	10 - 179	9	30
Pentachlorophenol	<0.96		38.1	31.7		ug/L		83	14 - 176	10	86

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: 380-115753-A-3-B MSD**  
**Matrix: Water**  
**Analysis Batch: 488403**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 487444**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phenanthrene	<0.19		38.1	32.0		ug/L		84	54 - 120	5	39
Phenol	<0.96		38.1	15.0		ug/L		39	5 - 120	9	64
Pyrene	<0.19		38.1	32.8		ug/L		86	52 - 120	3	49
<b>MSD MSD</b>											
Surrogate	%Recovery	Qualifier	Limits								
2,4,6-Tribromophenol (Surr)	68		28 - 127								
2-Fluorobiphenyl (Surr)	39		31 - 120								
2-Fluorophenol (Surr)	45		17 - 120								
Nitrobenzene-d5 (Surr)	31		27 - 120								
Phenol-d6 (Surr)	30		10 - 120								
p-Terphenyl-d14 (Surr)	49		45 - 120								

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

**Lab Sample ID: MB 570-489970/11**  
**Matrix: Water**  
**Analysis Batch: 489970**

**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			10/10/24 17:53	1
<b>MB MB</b>								
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
4-Bromofluorobenzene (Surr)	89		38 - 134		10/10/24 17:53	1		

**Lab Sample ID: LCS 570-489970/1010**  
**Matrix: Water**  
**Analysis Batch: 489970**

**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	427		ug/L		107	78 - 120		
<b>LCS LCS</b>									
Surrogate	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene (Surr)	95		38 - 134						

**Lab Sample ID: LCSD 570-489970/12**  
**Matrix: Water**  
**Analysis Batch: 489970**

**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	397		ug/L		99	78 - 120	7	10
<b>LCSD LCSD</b>									
Surrogate	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene (Surr)	96		38 - 134						

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: MRL 570-489970/1005**  
**Matrix: Water**  
**Analysis Batch: 489970**

**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	10.7		ug/L		107	50 - 150
<b>Surrogate</b>		<b>MRL %Recovery</b>	<b>MRL Qualifier</b>				<b>Limits</b>
4-Bromofluorobenzene (Surr)		79					38 - 134

**Lab Sample ID: 380-115753-B-3 MS**  
**Matrix: Water**  
**Analysis Batch: 489970**

**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	404		ug/L		101	68 - 122
<b>Surrogate</b>		<b>MS %Recovery</b>		<b>MS Qualifier</b>					<b>Limits</b>
4-Bromofluorobenzene (Surr)		92							38 - 134

**Lab Sample ID: 380-115753-B-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 489970**

**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	406		ug/L		101	68 - 122	0	18
<b>Surrogate</b>		<b>MSD %Recovery</b>		<b>MSD Qualifier</b>					<b>Limits</b>		
4-Bromofluorobenzene (Surr)		93							38 - 134		

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

**Lab Sample ID: MBL 380-111631/13-A**  
**Matrix: Water**  
**Analysis Batch: 111828**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 111631**

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	<0.0040		0.020	ug/L		10/03/24 13:30	10/03/24 20:05	1
1,2-Dibromo-3-Chloropropane	<0.0020		0.010	ug/L		10/03/24 13:30	10/03/24 20:05	1
1,2-Dibromoethane	<0.0040		0.010	ug/L		10/03/24 13:30	10/03/24 20:05	1
<b>Surrogate</b>		<b>MBL %Recovery</b>	<b>MBL Qualifier</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dibromopropane (Surr)		99				10/03/24 13:30	10/03/24 20:05	1

**Lab Sample ID: LCS 380-111631/38-A**  
**Matrix: Water**  
**Analysis Batch: 111828**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 111631**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	0.200	0.220		ug/L		110	70 - 130

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# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: LCS 380-111631/38-A**  
**Matrix: Water**  
**Analysis Batch: 111828**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 111631**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dibromo-3-Chloropropane	0.200	0.214		ug/L		107	70 - 130
1,2-Dibromoethane	0.200	0.226		ug/L		113	70 - 130
<b>Surrogate</b>		<b>LCS %Recovery</b>	<b>LCS Qualifier</b>				<b>Limits</b>
1,2-Dibromopropane (Surr)		107					60 - 140

**Lab Sample ID: MRL 380-111631/11-A**  
**Matrix: Water**  
**Analysis Batch: 111828**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 111631**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	0.0200	0.0208		ug/L		104	60 - 140
<b>Surrogate</b>		<b>MRL %Recovery</b>	<b>MRL Qualifier</b>				<b>Limits</b>
1,2-Dibromopropane (Surr)		92					60 - 140

**Lab Sample ID: MRL 380-111631/12-A**  
**Matrix: Water**  
**Analysis Batch: 111828**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 111631**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	0.0500	0.0519		ug/L		104	60 - 140
1,2-Dibromo-3-Chloropropane	0.0100	0.0108		ug/L		108	60 - 140
1,2-Dibromoethane	0.0100	0.00981	J	ug/L		98	60 - 140
<b>Surrogate</b>		<b>MRL %Recovery</b>	<b>MRL Qualifier</b>				<b>Limits</b>
1,2-Dibromopropane (Surr)		100					60 - 140

**Lab Sample ID: 380-115838-CA-1-A MS**  
**Matrix: Water**  
**Analysis Batch: 111828**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 111631**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	<0.020		1.27	1.25		ug/L		99	65 - 135
1,2-Dibromo-3-Chloropropane	<0.010		0.254	0.246		ug/L		97	65 - 135
1,2-Dibromoethane	<0.010		0.254	0.236		ug/L		93	65 - 135
<b>Surrogate</b>		<b>MS %Recovery</b>	<b>MS Qualifier</b>						<b>Limits</b>
1,2-Dibromopropane (Surr)		97							60 - 140

**Lab Sample ID: 380-115841-BX-1-A DU**  
**Matrix: Water**  
**Analysis Batch: 111828**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 111631**

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

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# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

Surrogate	DU DU		Limits
	%Recovery	Qualifier	
1,2-Dibromopropane (Surr)	100		60 - 140

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

Lab Sample ID: MB 380-111931/3-A  
Matrix: Water  
Analysis Batch: 111937

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 111931

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Toxaphene	<0.50		0.50	ug/L		10/04/24 15:37	10/04/24 18:12	1
Chlordane (n.o.s.)	<0.10		0.10	ug/L		10/04/24 15:37	10/04/24 18:12	1
PCB-1016	<0.070		0.070	ug/L		10/04/24 15:37	10/04/24 18:12	1
PCB-1221	<0.10		0.10	ug/L		10/04/24 15:37	10/04/24 18:12	1
PCB-1232	<0.10		0.10	ug/L		10/04/24 15:37	10/04/24 18:12	1
PCB-1242	<0.10		0.10	ug/L		10/04/24 15:37	10/04/24 18:12	1
PCB-1248	<0.10		0.10	ug/L		10/04/24 15:37	10/04/24 18:12	1
PCB-1254	<0.10		0.10	ug/L		10/04/24 15:37	10/04/24 18:12	1
PCB-1260	<0.070		0.070	ug/L		10/04/24 15:37	10/04/24 18:12	1
Polychlorinated biphenyls, Total	<0.10		0.10	ug/L		10/04/24 15:37	10/04/24 18:12	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	95		70 - 130	10/04/24 15:37	10/04/24 18:12	1

Lab Sample ID: LCS 380-111931/28-A  
Matrix: Water  
Analysis Batch: 111937

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 111931

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

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	98		70 - 130

Lab Sample ID: LCS 380-111931/30-A  
Matrix: Water  
Analysis Batch: 111937

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 111931

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

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	98		70 - 130

Lab Sample ID: LCSD 380-111931/29-A  
Matrix: Water  
Analysis Batch: 111937

Client Sample ID: Lab Control Sample Dup  
Prep Type: Total/NA  
Prep Batch: 111931

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: LCSD 380-111931/29-A**  
**Matrix: Water**  
**Analysis Batch: 111937**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 111931**

	LCSD %Recovery	LCSD Qualifier	Limits
<i>Surrogate</i>			
Tetrachloro-m-xylene	93		70 - 130

**Lab Sample ID: MRL 380-111931/1-A**  
**Matrix: Water**  
**Analysis Batch: 111937**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 111931**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Toxaphene	0.500	0.550		ug/L		110	50 - 150	
<i>Surrogate</i>								
<i>Surrogate</i>								
Tetrachloro-m-xylene								

**Lab Sample ID: MRL 380-111931/2-A**  
**Matrix: Water**  
**Analysis Batch: 111937**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 111931**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Chlordane (n.o.s.)	0.100	0.0925	J	ug/L		93	50 - 150	
<i>Surrogate</i>								
<i>Surrogate</i>								
Tetrachloro-m-xylene								

**Lab Sample ID: 380-115838-BX-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 111937**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 111931**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec	
									Limits	
Toxaphene	<0.51		2.52	2.76		ug/L		109	65 - 135	
<i>Surrogate</i>										
<i>Surrogate</i>										
Tetrachloro-m-xylene										

**Lab Sample ID: 380-115838-BY-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 111937**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 111931**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec	
									Limits	
Chlordane (n.o.s.)	<0.10		0.503	0.466		ug/L		93	65 - 135	
<i>Surrogate</i>										
<i>Surrogate</i>										
Tetrachloro-m-xylene										



# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: 380-115841-BY-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 111937**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 111931**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits	
	Result	Qualifier	Added	Result	Qualifier						
Toxaphene	<0.51		2.53	2.72		ug/L		108		65 - 135	
Surrogate	MS	MS	Limits								
%Recovery	Qualifier	Qualifier	Limits								
Tetrachloro-m-xylene	90		70 - 130								

**Lab Sample ID: 380-115841-BZ-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 111937**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 111931**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits	
	Result	Qualifier	Added	Result	Qualifier						
Chlordane (n.o.s.)	<0.10		0.510	0.490		ug/L		96		65 - 135	
Surrogate	MS	MS	Limits								
%Recovery	Qualifier	Qualifier	Limits								
Tetrachloro-m-xylene	101		70 - 130								

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

**Lab Sample ID: MB 570-488004/1-A**  
**Matrix: Water**  
**Analysis Batch: 488344**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 488004**

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac	
	Result	Qualifier							
Diesel Range Organics (C10-C24)	<25		25	ug/L		10/04/24 13:52	10/06/24 06:58	1	
Motor Oil Range Organics [C24-C36]	<25		25	ug/L		10/04/24 13:52	10/06/24 06:58	1	
C8-C18	<25		25	ug/L		10/04/24 13:52	10/06/24 06:58	1	
Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac			
%Recovery	Qualifier	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
n-Octacosane (Surr)	118		60 - 130	10/04/24 13:52	10/06/24 06:58	1			

**Lab Sample ID: LCS 570-488004/2-A**  
**Matrix: Water**  
**Analysis Batch: 488344**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 488004**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec	Limits
		Result	Qualifier					
C10-C28	1600	1160		ug/L		72		56 - 127
Surrogate	LCS	LCS	Limits					
%Recovery	Qualifier	Qualifier	Limits					
n-Octacosane (Surr)	108		60 - 130					

**Lab Sample ID: LCSD 570-488004/3-A**  
**Matrix: Water**  
**Analysis Batch: 488344**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 488004**

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	Limits	RPD	RPD
		Result	Qualifier						RPD	Limit
C10-C28	1600	1210		ug/L		76		56 - 127	5	23

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: LCSD 570-488004/3-A**  
**Matrix: Water**  
**Analysis Batch: 488344**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 488004**

	LCSD %Recovery	LCSD Qualifier	Limits
<i>n-Octacosane (Surr)</i>	116		60 - 130

**Lab Sample ID: MRL 570-488004/4-A**  
**Matrix: Water**  
**Analysis Batch: 488344**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 488004**

	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	Limits
C10-C28	0.0200	0.0222	J	mg/L		111	50 - 150

	MRL %Recovery	MRL Qualifier	Limits
<i>n-Octacosane (Surr)</i>	112		60 - 130

**Lab Sample ID: 380-115753-C-3-A MS**  
**Matrix: Water**  
**Analysis Batch: 488344**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 488004**

	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
C10-C28	<26		1630	1320		ug/L		81	70 - 130

	MS %Recovery	MS Qualifier	Limits
<i>n-Octacosane (Surr)</i>	111		60 - 130

**Lab Sample ID: 380-115753-C-3-B MSD**  
**Matrix: Water**  
**Analysis Batch: 488344**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 488004**

	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
C10-C28	<26		1630	1380		ug/L		85	70 - 130	5	20

	MSD %Recovery	MSD Qualifier	Limits
<i>n-Octacosane (Surr)</i>	112		60 - 130

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

**Lab Sample ID: MB 570-487891/10**  
**Matrix: Water**  
**Analysis Batch: 487891**

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

	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<0.10		0.10	mg/L			10/04/24 15:04	1

	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Hexafluoro-2-propanol (Surr)</i>	114		54 - 120		10/04/24 15:04	1

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: LCS 570-487891/11**  
**Matrix: Water**  
**Analysis Batch: 487891**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethanol	2.00	2.05		mg/L		102	78 - 131
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCS Qualifier</b>	<b>Limits</b>				
Hexafluoro-2-propanol (Surr)	104		54 - 120				

**Lab Sample ID: LCSD 570-487891/12**  
**Matrix: Water**  
**Analysis Batch: 487891**

**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	2.00		mg/L		100	78 - 131	1	25
<b>Surrogate</b>	<b>%Recovery</b>	<b>LCSD Qualifier</b>	<b>Limits</b>						
Hexafluoro-2-propanol (Surr)	107		54 - 120						

**Lab Sample ID: MRL 570-487891/13**  
**Matrix: Water**  
**Analysis Batch: 487891**

**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	0.0966	J	mg/L		97	50 - 150
<b>Surrogate</b>	<b>%Recovery</b>	<b>MRL Qualifier</b>	<b>Limits</b>				
Hexafluoro-2-propanol (Surr)	100		54 - 120				

**Lab Sample ID: 380-115709-1 MS**  
**Matrix: Drinking Water**  
**Analysis Batch: 487891**

**Client Sample ID: AIEA GULCH WELLS PUMP 2 (331-202-TP072)**  
**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	1.89		mg/L		95	20 - 173
<b>Surrogate</b>	<b>%Recovery</b>	<b>MS Qualifier</b>	<b>Limits</b>						
Hexafluoro-2-propanol (Surr)	96		54 - 120						

**Lab Sample ID: 380-115709-1 MSD**  
**Matrix: Drinking Water**  
**Analysis Batch: 487891**

**Client Sample ID: AIEA GULCH WELLS PUMP 2 (331-202-TP072)**  
**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	1.82		mg/L		91	20 - 173	4	21
<b>Surrogate</b>	<b>%Recovery</b>	<b>MSD Qualifier</b>	<b>Limits</b>								
Hexafluoro-2-propanol (Surr)	91		54 - 120								

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 380-111525/4**  
**Matrix: Water**  
**Analysis Batch: 111525**

**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			10/02/24 17:54	1
Nitrite as N	<0.050		0.050	mg/L			10/02/24 17:54	1

**Lab Sample ID: LCS 380-111525/7**  
**Matrix: Water**  
**Analysis Batch: 111525**

**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	2.43		mg/L		97	90 - 110
Nitrite as N	1.00	1.00		mg/L		100	90 - 110

**Lab Sample ID: LCSD 380-111525/8**  
**Matrix: Water**  
**Analysis Batch: 111525**

**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	2.41		mg/L		97	90 - 110	0	20
Nitrite as N	1.00	1.00		mg/L		100	90 - 110	0	20

**Lab Sample ID: MRL 380-111525/5**  
**Matrix: Water**  
**Analysis Batch: 111525**

**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	0.0108	J	mg/L		87	50 - 150
Nitrite as N	0.0125	0.0118	J	mg/L		94	50 - 150

**Lab Sample ID: MRL 380-111525/6**  
**Matrix: Water**  
**Analysis Batch: 111525**

**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	0.0446	J	mg/L		89	50 - 150
Nitrite as N	0.0500	0.0471	J	mg/L		94	50 - 150

**Lab Sample ID: 380-115716-B-2 MS**  
**Matrix: Water**  
**Analysis Batch: 111525**

**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	1.5		1.25	2.70		mg/L		99	80 - 120
Nitrite as N	<0.050		0.500	0.506		mg/L		101	80 - 120

**Lab Sample ID: 380-115716-B-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 111525**

**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	1.5		1.25	2.70		mg/L		99	80 - 120	0	20
Nitrite as N	<0.050		0.500	0.504		mg/L		101	80 - 120	0	20

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# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 380-111526/4**  
**Matrix: Water**  
**Analysis Batch: 111526**

**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			10/02/24 17:54	1
Sulfate	<0.25		0.25	mg/L			10/02/24 17:54	1

**Lab Sample ID: LCS 380-111526/7**  
**Matrix: Water**  
**Analysis Batch: 111526**

**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	25.0		mg/L		100	90 - 110
Sulfate	50.0	49.9		mg/L		100	90 - 110

**Lab Sample ID: LCSD 380-111526/8**  
**Matrix: Water**  
**Analysis Batch: 111526**

**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	24.9		mg/L		99	90 - 110	1	20
Sulfate	50.0	49.5		mg/L		99	90 - 110	1	20

**Lab Sample ID: MRL 380-111526/5**  
**Matrix: Water**  
**Analysis Batch: 111526**

**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	0.117	J	mg/L		94	50 - 150
Sulfate	0.250	0.234	J	mg/L		94	50 - 150

**Lab Sample ID: MRL 380-111526/6**  
**Matrix: Water**  
**Analysis Batch: 111526**

**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	0.448	J	mg/L		90	50 - 150
Sulfate	0.999	0.924		mg/L		92	50 - 150

**Lab Sample ID: 380-115716-B-2 MS**  
**Matrix: Water**  
**Analysis Batch: 111526**

**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	3.1		12.5	15.7		mg/L		101	80 - 120
Sulfate	3.3		25.0	28.3		mg/L		100	80 - 120

**Lab Sample ID: 380-115716-B-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 111526**

**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	3.1		12.5	15.7		mg/L		101	80 - 120	0	20
Sulfate	3.3		25.0	28.3		mg/L		100	80 - 120	0	20

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# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 380-111865/6**  
**Matrix: Water**  
**Analysis Batch: 111865**

**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			10/04/24 02:55	1

**Lab Sample ID: LCS 380-111865/7**  
**Matrix: Water**  
**Analysis Batch: 111865**

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

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

**Lab Sample ID: LCSD 380-111865/8**  
**Matrix: Water**  
**Analysis Batch: 111865**

**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	96.2		ug/L		96	90 - 110	1	10

**Lab Sample ID: MRL 380-111865/5**  
**Matrix: Water**  
**Analysis Batch: 111865**

**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	4.98	J	ug/L		100	75 - 125

**Lab Sample ID: 380-115804-A-1 MS**  
**Matrix: Water**  
**Analysis Batch: 111865**

**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	55		50.0	102		ug/L		93	80 - 120

**Lab Sample ID: 380-115804-A-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 111865**

**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	55		50.0	102		ug/L		94	80 - 120	1	20

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

**Lab Sample ID: MB 380-111765/119**  
**Matrix: Water**  
**Analysis Batch: 111765**

**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			10/03/24 16:24	1
Magnesium	<0.10		0.10	mg/L			10/03/24 16:24	1
Potassium	<1.0	^5+	1.0	mg/L			10/03/24 16:24	1
Sodium	<1.0		1.0	mg/L			10/03/24 16:24	1

Eurofins Eaton Analytical Pomona

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: LCS 380-111765/123**  
**Matrix: Water**  
**Analysis Batch: 111765**

**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	52.7		mg/L		105	85 - 115
Magnesium	20.0	20.9		mg/L		105	85 - 115
Potassium	20.0	21.6	^5+	mg/L		108	85 - 115
Sodium	50.0	52.3		mg/L		105	85 - 115

**Lab Sample ID: LCSD 380-111765/124**  
**Matrix: Water**  
**Analysis Batch: 111765**

**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	52.5		mg/L		105	85 - 115	0	20
Magnesium	20.0	20.8		mg/L		104	85 - 115	1	20
Potassium	20.0	21.5	^5+	mg/L		108	85 - 115	0	20
Sodium	50.0	52.2		mg/L		104	85 - 115	0	20

**Lab Sample ID: LLCS 380-111765/122**  
**Matrix: Water**  
**Analysis Batch: 111765**

**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	0.0998	J	mg/L		100	50 - 150
Potassium	1.00	0.817	J	mg/L		82	50 - 150
Sodium	1.00	1.07		mg/L		107	50 - 150

**Lab Sample ID: 380-115619-A-8 MS**  
**Matrix: Water**  
**Analysis Batch: 111765**

**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	27		50.0	81.9		mg/L		110	70 - 130
Magnesium	17		20.0	39.4		mg/L		110	70 - 130
Potassium	2.6	^5+	20.0	26.5	^5+	mg/L		120	70 - 130
Sodium	9.0		50.0	64.0		mg/L		110	70 - 130

**Lab Sample ID: 380-115619-A-8 MSD**  
**Matrix: Water**  
**Analysis Batch: 111765**

**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	27		50.0	83.0		mg/L		112	70 - 130	1	20
Magnesium	17		20.0	40.0		mg/L		113	70 - 130	2	20
Potassium	2.6	^5+	20.0	27.5	^5+	mg/L		124	70 - 130	3	20
Sodium	9.0		50.0	66.4		mg/L		115	70 - 130	4	20

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: MBL 380-112515/1-A**  
**Matrix: Water**  
**Analysis Batch: 112707**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 112515**

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.48		1.0	ug/L		10/09/24 11:37	10/09/24 20:07	1
Arsenic	<0.49		1.0	ug/L		10/09/24 11:37	10/09/24 20:07	1
Cadmium	<0.081		0.50	ug/L		10/09/24 11:37	10/09/24 20:07	1
Chromium	<0.80		1.0	ug/L		10/09/24 11:37	10/09/24 20:07	1
Copper	<0.27		2.0	ug/L		10/09/24 11:37	10/09/24 20:07	1
Lead	<0.29		0.50	ug/L		10/09/24 11:37	10/09/24 20:07	1
Nickel	<0.38		5.0	ug/L		10/09/24 11:37	10/09/24 20:07	1
Selenium	<1.0		5.0	ug/L		10/09/24 11:37	10/09/24 20:07	1
Silver	<0.40		0.50	ug/L		10/09/24 11:37	10/09/24 20:07	1
Thallium	<0.32		1.0	ug/L		10/09/24 11:37	10/09/24 20:07	1
Zinc	<4.3		20	ug/L		10/09/24 11:37	10/09/24 20:07	1

**Lab Sample ID: MBL 380-112515/1-A**  
**Matrix: Water**  
**Analysis Batch: 112818**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 112515**

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.48		1.0	ug/L		10/09/24 11:37	10/10/24 12:35	1
Arsenic	<0.49		1.0	ug/L		10/09/24 11:37	10/10/24 12:35	1
Beryllium	<0.18		1.0	ug/L		10/09/24 11:37	10/10/24 12:35	1
Cadmium	<0.081		0.50	ug/L		10/09/24 11:37	10/10/24 12:35	1
Chromium	<0.80		1.0	ug/L		10/09/24 11:37	10/10/24 12:35	1
Copper	<0.27		2.0	ug/L		10/09/24 11:37	10/10/24 12:35	1
Lead	<0.29		0.50	ug/L		10/09/24 11:37	10/10/24 12:35	1
Nickel	<0.38		5.0	ug/L		10/09/24 11:37	10/10/24 12:35	1
Selenium	<1.0		5.0	ug/L		10/09/24 11:37	10/10/24 12:35	1
Silver	<0.40		0.50	ug/L		10/09/24 11:37	10/10/24 12:35	1
Thallium	<0.32		1.0	ug/L		10/09/24 11:37	10/10/24 12:35	1
Zinc	<4.3		20	ug/L		10/09/24 11:37	10/10/24 12:35	1

**Lab Sample ID: LCS 380-112515/4-A**  
**Matrix: Water**  
**Analysis Batch: 112707**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 112515**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	50.0	49.2		ug/L		98	85 - 115
Arsenic	50.0	48.6		ug/L		97	85 - 115
Cadmium	50.0	49.4		ug/L		99	85 - 115
Chromium	50.0	49.1		ug/L		98	85 - 115
Copper	50.0	49.4		ug/L		99	85 - 115
Lead	50.0	50.8		ug/L		102	85 - 115
Nickel	50.0	49.9		ug/L		100	85 - 115
Selenium	50.0	50.0		ug/L		100	85 - 115
Silver	50.0	48.6		ug/L		97	85 - 115
Thallium	50.0	50.0		ug/L		100	85 - 115
Zinc	50.0	49.2		ug/L		98	85 - 115



# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: LCS 380-112515/4-A**  
**Matrix: Water**  
**Analysis Batch: 112818**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 112515**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	50.0	49.0		ug/L		98	85 - 115
Arsenic	50.0	49.7		ug/L		99	85 - 115
Beryllium	50.0	49.2		ug/L		98	85 - 115
Cadmium	50.0	48.9		ug/L		98	85 - 115
Chromium	50.0	50.4		ug/L		101	85 - 115
Copper	50.0	49.0		ug/L		98	85 - 115
Lead	50.0	50.1		ug/L		100	85 - 115
Nickel	50.0	49.7		ug/L		99	85 - 115
Selenium	50.0	49.4		ug/L		99	85 - 115
Silver	50.0	48.9		ug/L		98	85 - 115
Thallium	50.0	49.5		ug/L		99	85 - 115
Zinc	50.0	48.9		ug/L		98	85 - 115

**Lab Sample ID: LCSD 380-112515/5-A**  
**Matrix: Water**  
**Analysis Batch: 112707**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total Recoverable**  
**Prep Batch: 112515**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	50.0	48.3		ug/L		97	85 - 115	2	20
Arsenic	50.0	48.6		ug/L		97	85 - 115	0	20
Cadmium	50.0	49.4		ug/L		99	85 - 115	0	20
Chromium	50.0	48.9		ug/L		98	85 - 115	0	20
Copper	50.0	49.7		ug/L		99	85 - 115	1	20
Lead	50.0	50.7		ug/L		101	85 - 115	0	20
Nickel	50.0	50.2		ug/L		100	85 - 115	1	20
Selenium	50.0	49.8		ug/L		100	85 - 115	0	20
Silver	50.0	49.2		ug/L		98	85 - 115	1	20
Thallium	50.0	50.1		ug/L		100	85 - 115	0	20
Zinc	50.0	49.2		ug/L		98	85 - 115	0	20

**Lab Sample ID: LCSD 380-112515/5-A**  
**Matrix: Water**  
**Analysis Batch: 112818**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total Recoverable**  
**Prep Batch: 112515**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	50.0	50.2		ug/L		100	85 - 115	2	20
Arsenic	50.0	50.1		ug/L		100	85 - 115	1	20
Beryllium	50.0	49.1		ug/L		98	85 - 115	0	20
Cadmium	50.0	49.2		ug/L		98	85 - 115	1	20
Chromium	50.0	50.3		ug/L		101	85 - 115	0	20
Copper	50.0	49.1		ug/L		98	85 - 115	0	20
Lead	50.0	49.9		ug/L		100	85 - 115	0	20
Nickel	50.0	49.9		ug/L		100	85 - 115	0	20
Selenium	50.0	50.2		ug/L		100	85 - 115	2	20
Silver	50.0	50.3		ug/L		101	85 - 115	3	20
Thallium	50.0	49.1		ug/L		98	85 - 115	1	20
Zinc	50.0	49.2		ug/L		98	85 - 115	1	20

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: LLCS 380-112515/3-A**  
**Matrix: Water**  
**Analysis Batch: 112707**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 112515**

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	1.00	1.06		ug/L		106	50 - 150
Arsenic	1.00	1.16		ug/L		116	50 - 150
Cadmium	0.500	0.444	J	ug/L		89	50 - 150
Copper	2.00	1.92	J	ug/L		96	50 - 150
Lead	0.500	0.468	J	ug/L		94	50 - 150
Nickel	5.00	4.68	J	ug/L		94	50 - 150
Selenium	5.00	4.90	J	ug/L		98	50 - 150
Silver	0.500	0.486	J	ug/L		97	50 - 150
Thallium	1.00	0.952	J	ug/L		95	50 - 150
Zinc	20.0	19.1	J	ug/L		96	50 - 150

**Lab Sample ID: LLCS 380-112515/3-A**  
**Matrix: Water**  
**Analysis Batch: 112818**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 112515**

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	1.00	1.03		ug/L		103	50 - 150
Arsenic	1.00	1.01		ug/L		101	50 - 150
Beryllium	1.00	0.892	J	ug/L		89	50 - 150
Cadmium	0.500	0.498	J	ug/L		100	50 - 150
Chromium	1.00	1.02		ug/L		102	50 - 150
Copper	2.00	1.94	J	ug/L		97	50 - 150
Lead	0.500	0.470	J	ug/L		94	50 - 150
Nickel	5.00	4.79	J	ug/L		96	50 - 150
Selenium	5.00	4.79	J	ug/L		96	50 - 150
Silver	0.500	0.489	J	ug/L		98	50 - 150
Thallium	1.00	0.988	J	ug/L		99	50 - 150
Zinc	20.0	19.5	J	ug/L		97	50 - 150

**Lab Sample ID: 380-115740-D-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 112818**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 112515**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<1.0		50.0	50.6		ug/L		101	70 - 130
Arsenic	<1.0		50.0	49.0		ug/L		98	70 - 130
Beryllium	<1.0		50.0	46.0		ug/L		92	70 - 130
Cadmium	<0.50		50.0	47.7		ug/L		95	70 - 130
Chromium	2.2		50.0	49.7		ug/L		95	70 - 130
Copper	<2.0		50.0	44.6		ug/L		88	70 - 130
Lead	<0.50		50.0	46.6		ug/L		93	70 - 130
Nickel	<5.0		50.0	45.7		ug/L		91	70 - 130
Selenium	<5.0		50.0	49.1		ug/L		95	70 - 130
Silver	<0.50	F1	50.0	2.39	F1	ug/L		5	70 - 130
Thallium	<1.0		50.0	46.6		ug/L		93	70 - 130
Zinc	<20		50.0	59.5		ug/L		93	70 - 130

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: 380-115740-D-1-C MSD**  
**Matrix: Water**  
**Analysis Batch: 112818**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 112515**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Antimony	<1.0		50.0	51.7		ug/L		103	70 - 130	2	20
Arsenic	<1.0		50.0	50.7		ug/L		101	70 - 130	4	20
Beryllium	<1.0		50.0	46.3		ug/L		93	70 - 130	1	20
Cadmium	<0.50		50.0	49.1		ug/L		98	70 - 130	3	20
Chromium	2.2		50.0	51.9		ug/L		99	70 - 130	4	20
Copper	<2.0		50.0	46.0		ug/L		91	70 - 130	3	20
Lead	<0.50		50.0	48.4		ug/L		97	70 - 130	4	20
Nickel	<5.0		50.0	47.2		ug/L		93	70 - 130	3	20
Selenium	<5.0		50.0	51.3		ug/L		100	70 - 130	4	20
Silver	<0.50	F1	50.0	2.04	F1	ug/L		4	70 - 130	16	20
Thallium	<1.0		50.0	47.9		ug/L		96	70 - 130	3	20
Zinc	<20		50.0	61.6		ug/L		97	70 - 130	4	20

**Lab Sample ID: 380-115972-B-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 112707**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 112515**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Antimony	<1.0		50.0	49.8		ug/L		100	70 - 130		
Arsenic	<1.0		50.0	48.8		ug/L		96	70 - 130		
Cadmium	<0.50		50.0	47.2		ug/L		94	70 - 130		
Chromium	12	*-	50.0	57.9		ug/L		92	70 - 130		
Copper	2.0		50.0	46.2		ug/L		88	70 - 130		
Lead	<0.50		50.0	48.1		ug/L		96	70 - 130		
Nickel	<5.0		50.0	46.4		ug/L		91	70 - 130		
Selenium	<5.0		50.0	51.5		ug/L		98	70 - 130		
Silver	<0.50	F1	50.0	6.62	F1	ug/L		13	70 - 130		
Thallium	<1.0		50.0	47.0		ug/L		94	70 - 130		
Zinc	<20		50.0	57.0		ug/L		92	70 - 130		

**Lab Sample ID: 380-115972-B-1-C MSD**  
**Matrix: Water**  
**Analysis Batch: 112707**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 112515**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Antimony	<1.0		50.0	52.9		ug/L		106	70 - 130	6	20
Arsenic	<1.0		50.0	51.1		ug/L		101	70 - 130	5	20
Cadmium	<0.50		50.0	49.5		ug/L		99	70 - 130	5	20
Chromium	12	*-	50.0	61.0		ug/L		98	70 - 130	5	20
Copper	2.0		50.0	48.7		ug/L		93	70 - 130	5	20
Lead	<0.50		50.0	49.7		ug/L		99	70 - 130	3	20
Nickel	<5.0		50.0	48.7		ug/L		95	70 - 130	5	20
Selenium	<5.0		50.0	54.5		ug/L		104	70 - 130	6	20
Silver	<0.50	F1	50.0	7.19	F1	ug/L		14	70 - 130	8	20
Thallium	<1.0		50.0	49.0		ug/L		98	70 - 130	4	20
Zinc	<20		50.0	59.9		ug/L		97	70 - 130	5	20

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

## Method: 245.1 - Mercury (CVAA)

**Lab Sample ID: MB 810-118741/1-A**  
**Matrix: Water**  
**Analysis Batch: 118802**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 118741**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.10		0.10	ug/L		10/14/24 13:26	10/14/24 18:12	1

**Lab Sample ID: LCS 810-118741/3-A**  
**Matrix: Water**  
**Analysis Batch: 118802**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 118741**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	1.00	0.935		ug/L		93	85 - 115

**Lab Sample ID: LLCS 810-118741/2-A**  
**Matrix: Water**  
**Analysis Batch: 118802**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 118741**

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.100	0.113		ug/L		113	50 - 150

**Lab Sample ID: 810-122160-K-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 118802**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 118741**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	<0.10		1.00	0.951		ug/L		95	70 - 130

**Lab Sample ID: 810-122160-K-1-C MSD**  
**Matrix: Water**  
**Analysis Batch: 118802**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 118741**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.10		1.00	0.951		ug/L		95	70 - 130	0	20

## Method: SM 2320B - Alkalinity

**Lab Sample ID: MB 380-111949/1**  
**Matrix: Water**  
**Analysis Batch: 111949**

**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			10/04/24 16:34	1
Bicarbonate Alkalinity as CaCO3	<2.0		2.0	mg/L			10/04/24 16:34	1
Carbonate Alkalinity as CaCO3	<2.0		2.0	mg/L			10/04/24 16:34	1

**Lab Sample ID: LCS 380-111949/3**  
**Matrix: Water**  
**Analysis Batch: 111949**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	97.7		mg/L		98	90 - 110

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

## Method: SM 2320B - Alkalinity (Continued)

**Lab Sample ID: LCSD 380-111949/18**  
**Matrix: Water**  
**Analysis Batch: 111949**

**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	97.6		mg/L		98	90 - 110	0	20

**Lab Sample ID: LLCS 380-111949/4**  
**Matrix: Water**  
**Analysis Batch: 111949**

**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	20.0		mg/L		100	90 - 110		

**Lab Sample ID: MRL 380-111949/2**  
**Matrix: Water**  
**Analysis Batch: 111949**

**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	2.08		mg/L		104	50 - 150		

**Lab Sample ID: 380-115888-F-4 MS**  
**Matrix: Water**  
**Analysis Batch: 111949**

**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	78		100	175		mg/L		97	80 - 120		

**Lab Sample ID: 380-115888-F-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 111949**

**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	78		100	175		mg/L		97	80 - 120	0	20

**Lab Sample ID: 380-115888-F-4 DU**  
**Matrix: Water**  
**Analysis Batch: 111949**

**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	78			77.9		mg/L				0.08	20
Bicarbonate Alkalinity as CaCO3	78			77.9		mg/L				0.08	20
Carbonate Alkalinity as CaCO3	<2.0			<2.0		mg/L				NC	20

## Method: SM 2510B - Conductivity, Specific Conductance

**Lab Sample ID: MB 380-111944/3**  
**Matrix: Water**  
**Analysis Batch: 111944**

**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			10/04/24 16:34	1

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# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: LCS 380-111944/5**  
**Matrix: Water**  
**Analysis Batch: 111944**

**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	1010		umhos/cm		101	90 - 110

**Lab Sample ID: LCSD 380-111944/17**  
**Matrix: Water**  
**Analysis Batch: 111944**

**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	999		umhos/cm		100	90 - 110	1	10

**Lab Sample ID: MRL 380-111944/4**  
**Matrix: Water**  
**Analysis Batch: 111944**

**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	1.90	J	umhos/cm		95	50 - 150

**Lab Sample ID: 380-115888-F-4 DU**  
**Matrix: Water**  
**Analysis Batch: 111944**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	540	^2	537		umhos/cm		0.07	20

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

**Lab Sample ID: MB 380-111678/1**  
**Matrix: Water**  
**Analysis Batch: 111678**

**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			10/03/24 15:59	1

**Lab Sample ID: HLCS 380-111678/5**  
**Matrix: Water**  
**Analysis Batch: 111678**

**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	700		mg/L		100	80 - 114

**Lab Sample ID: LCS 380-111678/4**  
**Matrix: Water**  
**Analysis Batch: 111678**

**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	166		mg/L		95	80 - 114

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: MRL 380-111678/2**  
**Matrix: Water**  
**Analysis Batch: 111678**

**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 380-111678/3**  
**Matrix: Water**  
**Analysis Batch: 111678**

**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: 380-115709-1 DU**  
**Matrix: Drinking Water**  
**Analysis Batch: 111678**

**Client Sample ID: AIEA GULCH WELLS PUMP 2 (331-202-TP072)**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	310		306		mg/L		1	10

## Method: SM 4500 F C - Fluoride

**Lab Sample ID: MB 380-111954/38**  
**Matrix: Water**  
**Analysis Batch: 111954**

**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			10/04/24 19:47	1

**Lab Sample ID: MB 380-111954/72**  
**Matrix: Water**  
**Analysis Batch: 111954**

**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			10/04/24 22:20	1

**Lab Sample ID: LCS 380-111954/74**  
**Matrix: Water**  
**Analysis Batch: 111954**

**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	0.988		mg/L		99	90 - 110

**Lab Sample ID: LCSD 380-111954/75**  
**Matrix: Water**  
**Analysis Batch: 111954**

**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	0.987		mg/L		99	90 - 110	0	10

# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

## Method: SM 4500 F C - Fluoride (Continued)

**Lab Sample ID: MRL 380-111954/39**  
**Matrix: Water**  
**Analysis Batch: 111954**

**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	0.0508		mg/L		102	50 - 150

**Lab Sample ID: MRL 380-111954/5**  
**Matrix: Water**  
**Analysis Batch: 111954**

**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	0.0504		mg/L		101	50 - 150

**Lab Sample ID: MRL 380-111954/73**  
**Matrix: Water**  
**Analysis Batch: 111954**

**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	0.0495	J	mg/L		99	50 - 150

**Lab Sample ID: 380-116082-F-1 MS**  
**Matrix: Water**  
**Analysis Batch: 111954**

**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
Fluoride	0.052		1.00	1.04		mg/L		98	80 - 120

**Lab Sample ID: 380-116082-F-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 111954**

**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
Fluoride	0.052		1.00	1.04		mg/L		99	80 - 120	0	20

## Method: SM 4500 H+ B - pH

**Lab Sample ID: MB 380-111946/5**  
**Matrix: Water**  
**Analysis Batch: 111946**

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.3			SU			10/04/24 16:34	1

**Lab Sample ID: LCS 380-111946/6**  
**Matrix: Water**  
**Analysis Batch: 111946**

**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



# QC Sample Results

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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

**Lab Sample ID: LCSD 380-111946/18**  
**Matrix: Water**  
**Analysis Batch: 111946**

**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

**Lab Sample ID: 380-115888-F-4 DU**  
**Matrix: Water**  
**Analysis Batch: 111946**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.8		7.7		SU		0.6	2

## Method: SM 4500 S2 D - Sulfide, Total

**Lab Sample ID: MBL 380-111870/2**  
**Matrix: Water**  
**Analysis Batch: 111870**

**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			10/04/24 15:49	1

**Lab Sample ID: LCS 380-111870/5**  
**Matrix: Water**  
**Analysis Batch: 111870**

**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	0.267		mg/L		107	90 - 110

**Lab Sample ID: LCSD 380-111870/6**  
**Matrix: Water**  
**Analysis Batch: 111870**

**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	0.252		mg/L		101	90 - 110	6	20

**Lab Sample ID: MRL 380-111870/3**  
**Matrix: Water**  
**Analysis Batch: 111870**

**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	0.0586		mg/L		117	50 - 150

**Lab Sample ID: 380-115428-J-2 MS**  
**Matrix: Water**  
**Analysis Batch: 111870**

**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	0.129	F1	mg/L		51	80 - 120

# QC Sample Results

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

Job ID: 380-115709-1  
 SDG: Quarterly - Aiea Gulch Wells P2

## Method: SM 4500 S2 D - Sulfide, Total (Continued)

**Lab Sample ID: 380-115428-J-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 111870**

**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	0.125	F1	mg/L		50	80 - 120	3	20

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

# QC Association Summary

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

Job ID: 380-115709-1  
 SDG: Quarterly - Aiea Gulch Wells P2

## GC/MS VOA

### Analysis Batch: 111815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	524.2	
380-115709-2	TRAVEL BLANK	Total/NA	Water	524.2	
MB 380-111815/15	Method Blank	Total/NA	Water	524.2	
LCS 380-111815/11	Lab Control Sample	Total/NA	Water	524.2	
LCSD 380-111815/12	Lab Control Sample Dup	Total/NA	Water	524.2	
MRL 380-111815/13	Lab Control Sample	Total/NA	Water	524.2	
MRL 380-111815/14	Lab Control Sample	Total/NA	Water	524.2	

### Analysis Batch: 112090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	524.2	
380-115709-2	TRAVEL BLANK	Total/NA	Water	524.2	
MB 380-112090/5	Method Blank	Total/NA	Water	524.2	
LCS 380-112090/2	Lab Control Sample	Total/NA	Water	524.2	
LCSD 380-112090/3	Lab Control Sample Dup	Total/NA	Water	524.2	
MRL 380-112090/4	Lab Control Sample	Total/NA	Water	524.2	

### Analysis Batch: 112211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	524.2	
380-115709-2	TRAVEL BLANK	Total/NA	Water	524.2	

## GC/MS Semi VOA

### Prep Batch: 111994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	525.2	
MB 380-111994/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-111994/23-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-111994/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-111994/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-115709-1 MS	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	525.2	
380-115709-1 MSD	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	525.2	

### Analysis Batch: 112094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	525.2	111994
LCS 380-111994/23-A	Lab Control Sample	Total/NA	Water	525.2	111994
LCSD 380-111994/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	111994
MRL 380-111994/22-A	Lab Control Sample	Total/NA	Water	525.2	111994
380-115709-1 MS	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	525.2	111994
380-115709-1 MSD	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	525.2	111994

### Analysis Batch: 112221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 380-111994/21-A	Method Blank	Total/NA	Water	525.2	111994

### Prep Batch: 487444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	625.1	
MB 570-487444/1-A	Method Blank	Total/NA	Water	625.1	

# QC Association Summary

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

## GC/MS Semi VOA (Continued)

### Prep Batch: 487444 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 570-487444/2-A	Lab Control Sample	Total/NA	Water	625.1	
LCSD 570-487444/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	
380-115753-A-3-A MS	Matrix Spike	Total/NA	Water	625.1	
380-115753-A-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	625.1	

### Analysis Batch: 487832

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-487444/1-A	Method Blank	Total/NA	Water	625.1 SIM	487444
LCS 570-487444/2-A	Lab Control Sample	Total/NA	Water	625.1 SIM	487444
LCSD 570-487444/3-A	Lab Control Sample Dup	Total/NA	Water	625.1 SIM	487444

### Analysis Batch: 488403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	625.1 SIM	487444
380-115753-A-3-A MS	Matrix Spike	Total/NA	Water	625.1 SIM	487444
380-115753-A-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	625.1 SIM	487444

### Analysis Batch: 491128

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	625.1	487444
MB 570-487444/1-A	Method Blank	Total/NA	Water	625.1	487444

## GC VOA

### Analysis Batch: 489970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	8015B GRO LL	
380-115709-2	TRAVEL BLANK	Total/NA	Water	8015B GRO LL	
MB 570-489970/11	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-489970/1010	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-489970/12	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	
MRL 570-489970/1005	Lab Control Sample	Total/NA	Water	8015B GRO LL	
380-115753-B-3 MS	Matrix Spike	Total/NA	Water	8015B GRO LL	
380-115753-B-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B GRO LL	

## GC Semi VOA

### Prep Batch: 111631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	504.1	
380-115709-2	TRAVEL BLANK	Total/NA	Water	504.1	
MBL 380-111631/13-A	Method Blank	Total/NA	Water	504.1	
LCS 380-111631/38-A	Lab Control Sample	Total/NA	Water	504.1	
MRL 380-111631/11-A	Lab Control Sample	Total/NA	Water	504.1	
MRL 380-111631/12-A	Lab Control Sample	Total/NA	Water	504.1	
380-115838-CA-1-A MS	Matrix Spike	Total/NA	Water	504.1	
380-115841-BX-1-A DU	Duplicate	Total/NA	Water	504.1	

### Analysis Batch: 111828

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	504.1	111631
380-115709-2	TRAVEL BLANK	Total/NA	Water	504.1	111631

Eurofins Eaton Analytical Pomona

# QC Association Summary

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

## GC Semi VOA (Continued)

### Analysis Batch: 111828 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MBL 380-111631/13-A	Method Blank	Total/NA	Water	504.1	111631
LCS 380-111631/38-A	Lab Control Sample	Total/NA	Water	504.1	111631
MRL 380-111631/11-A	Lab Control Sample	Total/NA	Water	504.1	111631
MRL 380-111631/12-A	Lab Control Sample	Total/NA	Water	504.1	111631
380-115838-CA-1-A MS	Matrix Spike	Total/NA	Water	504.1	111631
380-115841-BX-1-A DU	Duplicate	Total/NA	Water	504.1	111631

### Prep Batch: 111931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	505	
MB 380-111931/3-A	Method Blank	Total/NA	Water	505	
LCS 380-111931/28-A	Lab Control Sample	Total/NA	Water	505	
LCS 380-111931/30-A	Lab Control Sample	Total/NA	Water	505	
LCSD 380-111931/29-A	Lab Control Sample Dup	Total/NA	Water	505	
MRL 380-111931/1-A	Lab Control Sample	Total/NA	Water	505	
MRL 380-111931/2-A	Lab Control Sample	Total/NA	Water	505	
380-115838-BX-1-B MS	Matrix Spike	Total/NA	Water	505	
380-115838-BY-1-B MS	Matrix Spike	Total/NA	Water	505	
380-115841-BY-1-B MS	Matrix Spike	Total/NA	Water	505	
380-115841-BZ-1-B MS	Matrix Spike	Total/NA	Water	505	

### Analysis Batch: 111937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	505	111931
MB 380-111931/3-A	Method Blank	Total/NA	Water	505	111931
LCS 380-111931/28-A	Lab Control Sample	Total/NA	Water	505	111931
LCS 380-111931/30-A	Lab Control Sample	Total/NA	Water	505	111931
LCSD 380-111931/29-A	Lab Control Sample Dup	Total/NA	Water	505	111931
MRL 380-111931/1-A	Lab Control Sample	Total/NA	Water	505	111931
MRL 380-111931/2-A	Lab Control Sample	Total/NA	Water	505	111931
380-115838-BX-1-B MS	Matrix Spike	Total/NA	Water	505	111931
380-115838-BY-1-B MS	Matrix Spike	Total/NA	Water	505	111931
380-115841-BY-1-B MS	Matrix Spike	Total/NA	Water	505	111931
380-115841-BZ-1-B MS	Matrix Spike	Total/NA	Water	505	111931

### Analysis Batch: 487891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	8015B	
MB 570-487891/10	Method Blank	Total/NA	Water	8015B	
LCS 570-487891/11	Lab Control Sample	Total/NA	Water	8015B	
LCSD 570-487891/12	Lab Control Sample Dup	Total/NA	Water	8015B	
MRL 570-487891/13	Lab Control Sample	Total/NA	Water	8015B	
380-115709-1 MS	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	8015B	
380-115709-1 MSD	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	8015B	

### Prep Batch: 488004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	3510C	
MB 570-488004/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-488004/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-488004/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

# QC Association Summary

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

## GC Semi VOA (Continued)

### Prep Batch: 488004 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 570-488004/4-A	Lab Control Sample	Total/NA	Water	3510C	
380-115753-C-3-A MS	Matrix Spike	Total/NA	Water	3510C	
380-115753-C-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	3510C	

### Analysis Batch: 488344

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	8015B	488004
MB 570-488004/1-A	Method Blank	Total/NA	Water	8015B	488004
LCS 570-488004/2-A	Lab Control Sample	Total/NA	Water	8015B	488004
LCSD 570-488004/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	488004
MRL 570-488004/4-A	Lab Control Sample	Total/NA	Water	8015B	488004
380-115753-C-3-A MS	Matrix Spike	Total/NA	Water	8015B	488004
380-115753-C-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	488004

## HPLC/IC

### Analysis Batch: 111525

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	300.0	
MB 380-111525/4	Method Blank	Total/NA	Water	300.0	
LCS 380-111525/7	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-111525/8	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-111525/5	Lab Control Sample	Total/NA	Water	300.0	
MRL 380-111525/6	Lab Control Sample	Total/NA	Water	300.0	
380-115716-B-2 MS	Matrix Spike	Total/NA	Water	300.0	
380-115716-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 111526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	300.0	
MB 380-111526/4	Method Blank	Total/NA	Water	300.0	
LCS 380-111526/7	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-111526/8	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-111526/5	Lab Control Sample	Total/NA	Water	300.0	
MRL 380-111526/6	Lab Control Sample	Total/NA	Water	300.0	
380-115716-B-2 MS	Matrix Spike	Total/NA	Water	300.0	
380-115716-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 111865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	300.0	
MB 380-111865/6	Method Blank	Total/NA	Water	300.0	
LCS 380-111865/7	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-111865/8	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-111865/5	Lab Control Sample	Total/NA	Water	300.0	
380-115804-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
380-115804-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

# QC Association Summary

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

## Metals

### Analysis Batch: 111765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	200.7 Rev 4.4	
MB 380-111765/119	Method Blank	Total/NA	Water	200.7 Rev 4.4	
LCS 380-111765/123	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
LCSD 380-111765/124	Lab Control Sample Dup	Total/NA	Water	200.7 Rev 4.4	
LLCS 380-111765/122	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
380-115619-A-8 MS	Matrix Spike	Total/NA	Water	200.7 Rev 4.4	
380-115619-A-8 MSD	Matrix Spike Duplicate	Total/NA	Water	200.7 Rev 4.4	

### Prep Batch: 112515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total Recoverable	Drinking Water	200.8	
MBL 380-112515/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 380-112515/4-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 380-112515/5-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	
LLCS 380-112515/3-A	Lab Control Sample	Total Recoverable	Water	200.8	
380-115740-D-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	
380-115740-D-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	
380-115972-B-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	
380-115972-B-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	

### Analysis Batch: 112707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total Recoverable	Drinking Water	200.8	112515
MBL 380-112515/1-A	Method Blank	Total Recoverable	Water	200.8	112515
LCS 380-112515/4-A	Lab Control Sample	Total Recoverable	Water	200.8	112515
LCSD 380-112515/5-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	112515
LLCS 380-112515/3-A	Lab Control Sample	Total Recoverable	Water	200.8	112515
380-115972-B-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	112515
380-115972-B-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	112515

### Analysis Batch: 112818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total Recoverable	Drinking Water	200.8	112515
MBL 380-112515/1-A	Method Blank	Total Recoverable	Water	200.8	112515
LCS 380-112515/4-A	Lab Control Sample	Total Recoverable	Water	200.8	112515
LCSD 380-112515/5-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	112515
LLCS 380-112515/3-A	Lab Control Sample	Total Recoverable	Water	200.8	112515
380-115740-D-1-B MS	Matrix Spike	Total Recoverable	Water	200.8	112515
380-115740-D-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	112515

### Prep Batch: 118741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	245.1	
MB 810-118741/1-A	Method Blank	Total/NA	Water	245.1	
LCS 810-118741/3-A	Lab Control Sample	Total/NA	Water	245.1	
LLCS 810-118741/2-A	Lab Control Sample	Total/NA	Water	245.1	
810-122160-K-1-B MS	Matrix Spike	Total/NA	Water	245.1	
810-122160-K-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

# QC Association Summary

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

## Metals

### Analysis Batch: 118802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	245.1	118741
MB 810-118741/1-A	Method Blank	Total/NA	Water	245.1	118741
LCS 810-118741/3-A	Lab Control Sample	Total/NA	Water	245.1	118741
LLCS 810-118741/2-A	Lab Control Sample	Total/NA	Water	245.1	118741
810-122160-K-1-B MS	Matrix Spike	Total/NA	Water	245.1	118741
810-122160-K-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	118741

## General Chemistry

### Analysis Batch: 111678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	SM 2540C	
MB 380-111678/1	Method Blank	Total/NA	Water	SM 2540C	
HLCS 380-111678/5	Lab Control Sample	Total/NA	Water	SM 2540C	
LCS 380-111678/4	Lab Control Sample	Total/NA	Water	SM 2540C	
MRL 380-111678/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MRL 380-111678/3	Lab Control Sample	Total/NA	Water	SM 2540C	
380-115709-1 DU	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	SM 2540C	

### Analysis Batch: 111870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	SM 4500 S2 D	
MBL 380-111870/2	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 380-111870/5	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 380-111870/6	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	
MRL 380-111870/3	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
380-115428-J-2 MS	Matrix Spike	Total/NA	Water	SM 4500 S2 D	
380-115428-J-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 S2 D	

### Analysis Batch: 111944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	SM 2510B	
MB 380-111944/3	Method Blank	Total/NA	Water	SM 2510B	
LCS 380-111944/5	Lab Control Sample	Total/NA	Water	SM 2510B	
LCSD 380-111944/17	Lab Control Sample Dup	Total/NA	Water	SM 2510B	
MRL 380-111944/4	Lab Control Sample	Total/NA	Water	SM 2510B	
380-115888-F-4 DU	Duplicate	Total/NA	Water	SM 2510B	

### Analysis Batch: 111946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	SM 4500 H+ B	
MB 380-111946/5	Method Blank	Total/NA	Water	SM 4500 H+ B	
LCS 380-111946/6	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
LCSD 380-111946/18	Lab Control Sample Dup	Total/NA	Water	SM 4500 H+ B	
380-115888-F-4 DU	Duplicate	Total/NA	Water	SM 4500 H+ B	

### Analysis Batch: 111949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	SM 2320B	
MB 380-111949/1	Method Blank	Total/NA	Water	SM 2320B	
LCS 380-111949/3	Lab Control Sample	Total/NA	Water	SM 2320B	



# QC Association Summary

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

Job ID: 380-115709-1  
 SDG: Quarterly - Aiea Gulch Wells P2

## General Chemistry (Continued)

### Analysis Batch: 111949 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 380-111949/18	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
LLCS 380-111949/4	Lab Control Sample	Total/NA	Water	SM 2320B	
MRL 380-111949/2	Lab Control Sample	Total/NA	Water	SM 2320B	
380-115888-F-4 MS	Matrix Spike	Total/NA	Water	SM 2320B	
380-115888-F-4 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 2320B	
380-115888-F-4 DU	Duplicate	Total/NA	Water	SM 2320B	

### Analysis Batch: 111954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	SM 4500 F C	
MB 380-111954/38	Method Blank	Total/NA	Water	SM 4500 F C	
MB 380-111954/72	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 380-111954/74	Lab Control Sample	Total/NA	Water	SM 4500 F C	
LCSD 380-111954/75	Lab Control Sample Dup	Total/NA	Water	SM 4500 F C	
MRL 380-111954/39	Lab Control Sample	Total/NA	Water	SM 4500 F C	
MRL 380-111954/5	Lab Control Sample	Total/NA	Water	SM 4500 F C	
MRL 380-111954/73	Lab Control Sample	Total/NA	Water	SM 4500 F C	
380-116082-F-1 MS	Matrix Spike	Total/NA	Water	SM 4500 F C	
380-116082-F-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 F C	



# Lab Chronicle

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

**Client Sample ID: AIEA GULCH WELLS PUMP 2  
(331-202-TP072)**

**Lab Sample ID: 380-115709-1**

**Date Collected: 10/01/24 10:46**

**Matrix: Drinking Water**

**Date Received: 10/02/24 10:20**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	112090	P3EE	EA POM	10/07/24 18:18
Total/NA	Analysis	524.2		1	111815	N4CJ	EA POM	10/05/24 03:22
Total/NA	Analysis	524.2		1	112211	KP	EA POM	10/05/24 03:22
Total/NA	Prep	525.2			111994	KRD3	EA POM	10/06/24 12:09
Total/NA	Analysis	525.2		1	112094	UPAC	EA POM	10/07/24 17:02
Total/NA	Prep	625.1			487444	H1SH	EET CAL 4	10/04/24 05:24
Total/NA	Analysis	625.1		1	491128	CG	EET CAL 4	10/14/24 11:26
Total/NA	Prep	625.1			487444	H1SH	EET CAL 4	10/04/24 05:24
Total/NA	Analysis	625.1 SIM		1	488403	PQS1	EET CAL 4	10/06/24 15:11
Total/NA	Analysis	8015B GRO LL		1	489970	A9VE	EET CAL 4	10/11/24 01:44
Total/NA	Prep	504.1			111631	LZ8Q	EA POM	10/03/24 13:30 - 10/03/24 15:00 <sup>1</sup>
Total/NA	Analysis	504.1		1	111828	LZ8Q	EA POM	10/04/24 01:46
Total/NA	Prep	505			111931	DR5R	EA POM	10/04/24 15:37 - 10/04/24 16:55 <sup>1</sup>
Total/NA	Analysis	505		1	111937	DR5R	EA POM	10/04/24 21:24
Total/NA	Prep	3510C			488004	H6FE	EET CAL 4	10/04/24 13:52
Total/NA	Analysis	8015B		1	488344	UJ3K	EET CAL 4	10/06/24 09:02
Total/NA	Analysis	8015B		1	487891	ZE2W	EET CAL 4	10/04/24 17:15
Total/NA	Analysis	300.0		5	111525	BG6L	EA POM	10/02/24 20:42
Total/NA	Analysis	300.0		5	111526	BG6L	EA POM	10/02/24 20:42
Total/NA	Analysis	300.0		1	111865	UNJR	EA POM	10/04/24 08:37
Total/NA	Analysis	200.7 Rev 4.4		1	111765	T8BB	EA POM	10/03/24 17:00
Total Recoverable	Prep	200.8			112515	Z45W	EA POM	10/09/24 11:37
Total Recoverable	Analysis	200.8		1	112707	AAE8	EA POM	10/09/24 20:38
Total Recoverable	Prep	200.8			112515	Z45W	EA POM	10/09/24 11:37
Total Recoverable	Analysis	200.8		1	112818	AAE8	EA POM	10/10/24 12:54
Total/NA	Prep	245.1			118741	AC	EA SB	10/14/24 13:26
Total/NA	Analysis	245.1		1	118802	AC	EA SB	10/14/24 18:37
Total/NA	Analysis	SM 2320B		1	111949	PK4Q	EA POM	10/04/24 20:39
Total/NA	Analysis	SM 2510B		1	111944	PK4Q	EA POM	10/04/24 20:39
Total/NA	Analysis	SM 2540C		1	111678	UJRF	EA POM	10/03/24 15:59
Total/NA	Analysis	SM 4500 F C		1	111954	PK4Q	EA POM	10/04/24 22:58
Total/NA	Analysis	SM 4500 H+ B		1	111946	PK4Q	EA POM	10/04/24 20:39
Total/NA	Analysis	SM 4500 S2 D		1	111870	MH2L	EA POM	10/04/24 15:49

**Client Sample ID: TRAVEL BLANK**

**Lab Sample ID: 380-115709-2**

**Date Collected: 10/01/24 10:46**

**Matrix: Water**

**Date Received: 10/02/24 10:20**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	112090	P3EE	EA POM	10/07/24 18:41
Total/NA	Analysis	524.2		1	111815	N4CJ	EA POM	10/05/24 03:44

# Lab Chronicle

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

Job ID: 380-115709-1  
 SDG: Quarterly - Aiea Gulch Wells P2

**Client Sample ID: TRAVEL BLANK**

**Lab Sample ID: 380-115709-2**

**Date Collected: 10/01/24 10:46**

**Matrix: Water**

**Date Received: 10/02/24 10:20**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	112211	KP	EA POM	10/05/24 03:44
Total/NA	Analysis	8015B GRO LL		1	489970	A9VE	EET CAL 4	10/10/24 22:15
Total/NA	Prep	504.1			111631	LZ8Q	EA POM	10/03/24 13:30 - 10/03/24 15:00 <sup>1</sup>
Total/NA	Analysis	504.1		1	111828	LZ8Q	EA POM	10/04/24 02:28

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

**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



# Accreditation/Certification Summary

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

Job ID: 380-115709-1  
 SDG: Quarterly - Aiea Gulch Wells P2

## 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		Drinking Water	Tertiary Butyl Alcohol (TBA)
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
524.2		Water	Tertiary Butyl Alcohol (TBA)
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)

# Accreditation/Certification Summary

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

Job ID: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

## 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	Endosulfan sulfate
525.2	525.2	Drinking Water	Endrin aldehyde
525.2	525.2	Drinking Water	EPTC
525.2	525.2	Drinking Water	gamma-Chlordane
525.2	525.2	Drinking Water	Isophorone
525.2	525.2	Drinking Water	Malathion
525.2	525.2	Drinking Water	Parathion
525.2	525.2	Drinking Water	Pendimethalin (Penoxaline)
525.2	525.2	Drinking Water	Terbacil
525.2	525.2	Drinking Water	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	11-15-24
Arkansas DEQ	State	88-0161	07-02-25
California	Los Angeles County Sanitation Districts	9257304	08-01-24 *
California	SCAQMD LAP	17LA0919	11-30-24
California	State	3082	07-31-26
Kansas	NELAP	E-10420	07-31-25
Nevada	State	CA00111	07-31-25
Oregon	NELAP	4175	02-02-25
USDA	US Federal Programs	P330-22-00059	06-08-26

## 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	07-31-26
Alabama	State	40700	06-30-25
Alaska	State	IN00035	06-30-25
Arizona	State	AZ0432	07-26-25
Arkansas (DW)	State	EPA IN00035	06-30-25
California	State	2920	06-30-25
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	06-30-25
Guam	State	23-011R	07-15-25

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

# Accreditation/Certification Summary

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

Job ID: 380-115709-1  
 SDG: Quarterly - Aiea Gulch Wells P2

## 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
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	09-30-25
Indiana	State	C-71-01	12-31-25
Indiana (Micro)	State	M-76-07	12-31-25
Iowa	State	IA Lab #098	11-01-25
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	06-30-25
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	09-30-27
Montana (DW)	State	CERT0026	01-01-25
Nebraska	State	NE-OS-05-04	06-30-25
Nevada	State	IN000352024-01	07-31-25
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	07-31-25
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	12-31-24
Oregon	NELAP	4156	09-16-25
Pennsylvania	NELAP	68-00466	04-30-25
Puerto Rico	State	IN00035	04-01-25
Rhode Island	State	LAO00343	12-30-24
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 UCMR 5	US Federal Programs	IN00035	12-31-25
Utah	NELAP	IN00035	07-31-25
Vermont	State	VT-8775	11-15-24
Virginia	NELAP	460275	03-14-25
Washington	State	C837	01-01-25
West Virginia (DW)	State	9927 C	01-31-25
Wisconsin	State	999766900	08-31-25
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: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

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
200.8	Preparation, Total Recoverable Metals	EPA	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: 380-115709-1  
SDG: Quarterly - Aiea Gulch Wells P2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-115709-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Drinking Water	10/01/24 10:46	10/02/24 10:20
380-115709-2	TRAVEL BLANK	Water	10/01/24 10:46	10/02/24 10:20

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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



eurofins

<b>Client Information</b> Company: 630 South Beretania Street Chemistry Lab Address: Honolulu HI 96843 State: HI Zip: 96843 Phone: 808-748-5091 (tel) Email: rfenstemache@hbwis.org Project Name: RED-HILL Site:		Sampler: Bailey Phone: +1 808-748-5840 Lab PM: Arada Rachelle E-Mail: Rachelle.Arada@et.eurofins.com		Camer Tracking No(s): 380-115709 COC State of Origin:		COC No: Page 1 of 2 Job #			
Due Date Requested: TAT Requested (days): Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No PO #: C20525101 exp 05312023 WO #:		PWSID		<b>Analysis Requested</b>					
Sample Date: 1-Oct-2024 Sample Time: 1046 Sample Type: G Matrix: Water		Field Filtered Sample (Yes or No): Perform MS/MSD (Yes or No): 2320B 2510B, SM4500_H+ 2540C, Calcd Total dissolved Solids (TDS) SM4500_S2_D Sulfide, Total 524 2_Pres_PREC 524 2_SIM_PREC 525 2_PREC 525plus PLUS TICs 300_OF_28D_B 300_OF_28D_PREC 300_OF_48H_PREC 4500_F_C 245 1 Local Method 8015B_GRO_LL (MOD) GRO 8015B_DRO_LL_CS HNL Ranges C10-C24/C24-C36/C8-C18 8015B_OAI Ethanol 625 1 625 1_SIM		Total Number of Containers:		Special Instructions/Note: 1 7789 5468 5250 40 00=40 2 7789 5468 5290 5 2-00-5-2			
Sample Identification: Area Gulch Wells P2 Travel Blank		Sample Date: 1-Oct-2024 Sample Time: 1046 Sample Type: G Matrix: Water		Field Filtered Sample (Yes or No): Perform MS/MSD (Yes or No): 2320B 2510B, SM4500_H+ 2540C, Calcd Total dissolved Solids (TDS) SM4500_S2_D Sulfide, Total 524 2_Pres_PREC 524 2_SIM_PREC 525 2_PREC 525plus PLUS TICs 300_OF_28D_B 300_OF_28D_PREC 300_OF_48H_PREC 4500_F_C 245 1 Local Method 8015B_GRO_LL (MOD) GRO 8015B_DRO_LL_CS HNL Ranges C10-C24/C24-C36/C8-C18 8015B_OAI Ethanol 625 1 625 1_SIM		Total Number of Containers:		Special Instructions/Note: 1 7789 5468 5250 40 00=40 2 7789 5468 5290 5 2-00-5-2	
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					
Empty Kit Relinquished by:		Date:		Method of Shipment:					
Relinquished by:		Date/Time: 10-22-2024 10:20 Company: E&P		Date/Time: 10-22-2024 10:20 Company: E&P					
Relinquished by:		Date/Time:		Date/Time:					
Custody Seals Intact. <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No:		Cooler Temperature(s) °C and Other Remarks: 3.2-00=3-2 75IA Ge1					

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Ver 01.16.2019



# Chain of Custody Record



<b>Client Information (Sub Contract Lab)</b>		Lab Pkt: Avada, Rachelle	Carrier Tracking No(s): 380-158212.1
Client Contact: Shipping/Receiving		E-Mail: Rachelle.Avada@eurofins.com	State of Origin: Hawaii
Company: Eurofins Environment Testing Southwest,		Accreditations Required (See note): State Hawaii	Job #: 380-115709-1
Address: 2841 Dow Avenue, Suite 100,		Due Date Requested: 10/15/2024	Preservation Codes:
City: Tustin	State, Zip: CA, 92780	TAT Requested (days):	
Phone: 714-895-5494(Tel)	PO #:		
Email:	WO #:		
Project Name: RED-HILL	Project #: 38001111		
Site: Honolulu BWS Sites	SSOW#:		

  

Sample Identification	Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=g grab)	Matrix (Water, Swallow, Onsite, Other)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9015B_DMI Ethanol	9015B_GRO_LL_C31810C_LL_HNL Ranges: C10-C24/C24-C31810C	9015B_GRO_LL6030C (MOP) GRO	925_1_SIW625_Prep (MOP) Extended List	925_1I625_Prep (MOP) Tentatively Identified Compounds (Hold)	Total Number of Containers	Special Instructions/Note:
AIEA GULCH WELLS PUMP 2 (331-202-TP072) (380-115709-1)		10/1/24	10:46 Hawaiian	G	Water	X	X	X	X	X	X		9	MRLs are needed. MRLs are needed. Confirm any hits >RL
TRAVEL BLANK (380-115709-2)		10/1/24	10:46 Hawaiian	G	Water								2	MRLs are needed. Confirm any hits >RL

  

380-115709 Chain of Custody

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





# Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-115709-1

SDG Number: Quarterly - Aiea Gulch Wells P2

**Login Number: 115709**

**List Number: 1**

**Creator: Gerfen, Chris**

**List Source: Eurofins Eaton Analytical Pomona**

Question	Answer	Comment
The coolers custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler(s) Temperature is acceptable.	True	
Cooler(s) Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and is legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
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: 380-115709-1  
SDG Number: Quarterly - Aiea Gulch Wells P2

**Login Number: 115709**

**List Number: 2**

**Creator: Khana, Piyush**

**List Source: Eurofins Calscience**

**List Creation: 10/03/24 01:28 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-115709-1

SDG Number: Quarterly - Aiea Gulch Wells P2

**Login Number: 115709**

**List Number: 3**

**Creator: DePriest, Kellie**

**List Source: Eurofins Eaton Analytical South Bend**

**List Creation: 10/07/24 12:20 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

