

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

RED-HILL
Aiea Gulch Wells P2

JOB NUMBER

380-110732-1

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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Authorized for release by
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Definitions/Glossary

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

Job ID: 380-110732-1
SDG: Aiea Gulch Wells P2

Glossary

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

Case Narrative

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

Job ID: 380-110732-1

Job ID: 380-110732-1

Eurofins Eaton Analytical Pomona

Job Narrative 380-110732-1

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

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

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

Receipt

The samples were received on 8/28/2024 9:54 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°C.

GC/MS VOA

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: 380-110732-1
SDG: Aiea Gulch Wells P2

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

Lab Sample ID: 380-110732-1

No Detections.

Client Sample ID: TB:AIEA GULCH WELLS P2 (331-202-TP072)

Lab Sample ID: 380-110732-2

No Detections.

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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: 380-110732-1
 SDG: Aiea Gulch Wells P2

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

Lab Sample ID: 380-110732-1

Date Collected: 08/26/24 10:30

Matrix: Drinking Water

Date Received: 08/28/24 09:54

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			09/03/24 17:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130				09/03/24 17:00	1
4-Bromofluorobenzene (Surr)	95		70 - 130				09/03/24 17:00	1
1,2-Dichloroethane-d4 (Surr)	104		70 - 130				09/03/24 17:00	1

Client Sample ID: TB:AIEA GULCH WELLS P2 (331-202-TP072)

Lab Sample ID: 380-110732-2

Date Collected: 08/26/24 10:30

Matrix: Water

Date Received: 08/28/24 09:54

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			09/03/24 17:22	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130				09/03/24 17:22	1
4-Bromofluorobenzene (Surr)	97		70 - 130				09/03/24 17:22	1
1,2-Dichloroethane-d4 (Surr)	101		70 - 130				09/03/24 17:22	1

Surrogate Summary

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

Job ID: 380-110732-1
SDG: 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)
380-110732-1	AIEA GULCH WELLS PUMP 2 (96	95	104

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)
380-110732-2	TB:AIEA GULCH WELLS P2 (3	96	97	101
LCS 380-106526/2	Lab Control Sample	97	91	101
LCSD 380-106526/3	Lab Control Sample Dup	96	94	100
MB 380-106526/5	Method Blank	97	93	104

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 380-106526/4	Lab Control Sample	96	95	103

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

QC Sample Results

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

Job ID: 380-110732-1
SDG: Aiea Gulch Wells P2

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

Lab Sample ID: MB 380-106526/5
Matrix: Water
Analysis Batch: 106526

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			09/03/24 15:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		70 - 130				09/03/24 15:29	1
4-Bromofluorobenzene (Surr)	93		70 - 130				09/03/24 15:29	1
1,2-Dichloroethane-d4 (Surr)	104		70 - 130				09/03/24 15:29	1

Lab Sample ID: LCS 380-106526/2
Matrix: Water
Analysis Batch: 106526

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Tertiary Butyl Alcohol (TBA)	5.00	5.91		ug/L		118	70 - 130
Surrogate	%Recovery	Qualifier	Limits				
Toluene-d8 (Surr)	97		70 - 130				
4-Bromofluorobenzene (Surr)	91		70 - 130				
1,2-Dichloroethane-d4 (Surr)	101		70 - 130				

Lab Sample ID: LCSD 380-106526/3
Matrix: Water
Analysis Batch: 106526

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Tertiary Butyl Alcohol (TBA)	5.00	5.71		ug/L		114	70 - 130	3	20
Surrogate	%Recovery	Qualifier	Limits						
Toluene-d8 (Surr)	96		70 - 130						
4-Bromofluorobenzene (Surr)	94		70 - 130						
1,2-Dichloroethane-d4 (Surr)	100		70 - 130						

Lab Sample ID: MRL 380-106526/4
Matrix: Water
Analysis Batch: 106526

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Tertiary Butyl Alcohol (TBA)	2.00	2.43		ug/L		122	50 - 150
Surrogate	%Recovery	Qualifier	Limits				
Toluene-d8 (Surr)	96		50 - 150				
4-Bromofluorobenzene (Surr)	95		50 - 150				
1,2-Dichloroethane-d4 (Surr)	103		50 - 150				

QC Association Summary

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

Job ID: 380-110732-1
SDG: Aiea Gulch Wells P2

GC/MS VOA

Analysis Batch: 106526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-110732-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	524.2	
380-110732-2	TB:AIEA GULCH WELLS P2 (331-202-TP072)	Total/NA	Water	524.2	
MB 380-106526/5	Method Blank	Total/NA	Water	524.2	
LCS 380-106526/2	Lab Control Sample	Total/NA	Water	524.2	
LCSD 380-106526/3	Lab Control Sample Dup	Total/NA	Water	524.2	
MRL 380-106526/4	Lab Control Sample	Total/NA	Water	524.2	

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Lab Chronicle

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

Job ID: 380-110732-1
 SDG: Aiea Gulch Wells P2

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

Lab Sample ID: 380-110732-1

Date Collected: 08/26/24 10:30

Matrix: Drinking Water

Date Received: 08/28/24 09:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	106526	P3EE	EA POM	09/03/24 17:00

Client Sample ID: TB:AIEA GULCH WELLS P2 (331-202-TP072)

Lab Sample ID: 380-110732-2

Date Collected: 08/26/24 10:30

Matrix: Water

Date Received: 08/28/24 09:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	106526	P3EE	EA POM	09/03/24 17:22

Laboratory References:

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



Accreditation/Certification Summary

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

Job ID: 380-110732-1
SDG: Aiea Gulch Wells P2

Laboratory: Eurofins Eaton Analytical Pomona

The accreditations/certifications listed below are applicable to this report.

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

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Method Summary

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

Job ID: 380-110732-1
SDG: Aiea Gulch Wells P2

Method	Method Description	Protocol	Laboratory
524.2	Volatile Organic Compounds (GC/MS SIM)	EPA-DW	EA POM

Protocol References:

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

Laboratory References:

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



Sample Summary

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

Job ID: 380-110732-1
SDG: Aiea Gulch Wells P2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-110732-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Drinking Water	08/26/24 10:30	08/28/24 09:54
380-110732-2	TB:AIEA GULCH WELLS P2 (331-202-TP072)	Water	08/26/24 10:30	08/28/24 09:54

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Monrovia, CA (Suite 100)
 750 Royal Oaks Drive Suite 100
 Monrovia CA 91016
 Phone (626) 386-1100

Chain of Custody Record



Client Information Sampler: Bailey Lab PII: Arada Rachelle Client Contact: Dr. Ron Fenstermacher Phone: +1 808-748-5840 E-Mail: Rachelle.Arada@et-leuronisus.com Company: City & County of Honolulu PWSID:		Camper Tracking No(s): State of Origin:		COC No: Page: Page 2 of 2 Job #:	
Due Date Requested: TAT Requested (days): Compliance Project: <input type="checkbox"/> No PO #: C20525101 exp 05312023 WO #:		Analysis Requested			
Address: 630 South Beretama Street Chemistry Lab City: Honolulu State/Zip: HI 96843 Phone: 808-748-5091 (tel) Email: rfenstermacher@hbws.org Project Name: RED-HILL Site:		Preservation Codes: A HCL B NaOH C Zn Acetate D Nitric Acid E NaHSO4 F MeOH G Archlor H Ascorbic Acid I Ice J DI Water K EDTA L EDA Other: M Hexane N None O AsNaO2 P Na2O4S Q Na2SO3 R Na2SO3 S H2SO4 T TSP Dodecahydrate U Acetone V MCAA W pH 4-5 Y Trizma Z other (specify)			
Sample Identification: Area Gulch Wells P2 Travel Blank		Sample Date: 26-Aug-2024 Sample Time: 1031 Sample Type (C=Comp, G=grab): G Preservation Code: Water		Field Filtered Sample (Yes or No): <input checked="" type="checkbox"/> Perform MS/MSD (Yes or No): <input checked="" type="checkbox"/> HA: 3 524 2 SIM_PREC TBA by 524 2 SIM Total Number of Containers: <input checked="" type="checkbox"/>	
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: Relinquished by: [Redacted] Relinquished by: [Redacted] Relinquished by: [Redacted]		Method of Shipment: FED EX Date/Time Received: 08/28/2024 09:54 Date/Time Received by: E. RETNER Date/Time Received by: [Redacted]			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No:		Cooler Temperature(s) °C and Other Remarks: (F151A) 3.1°-0.1°=3.0° 6EL-PT02EN			



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-110732-1
SDG Number: Aiea Gulch Wells P2

Login Number: 110732
List Number: 1
Creator: Gerfen, Chris

List Source: Eurofins Eaton Analytical Pomona

Question	Answer	Comment
The coolers custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
Samples were received on ice.	True	
Cooler(s) Temperature is acceptable.	True	
Cooler(s) Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and is legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
CIO4 headspace requirement met (>50% for CA, >30% for other states).	N/A	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

