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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Mr. Erwin Kawata  
City & County of Honolulu  
630 South Beretania Street  
Public Service Bldg. Room 310  
Honolulu, Hawaii 96843

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## JOB DESCRIPTION

RED-HILL  
PFAS: Aiea Gulch Wells Pump 1  
RUSH Weekly Red Hill

## JOB NUMBER

380-199953-1

# Eurofins 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 Drinking Water and Wastewater West, 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



Authorized for release by  
Maria Lopez, Project Manager  
[Maria.Lopez@et.eurofinsus.com](mailto:Maria.Lopez@et.eurofinsus.com)  
(626)386-1100

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# Definitions/Glossary

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

Job ID: 380-199953-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

## Qualifiers

### LCMS

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.

## Glossary

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

# Case Narrative

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

Job ID: 380-199953-1

**Job ID: 380-199953-1**

**Eurofins Pomona**

## Job Narrative 380-199953-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

### Receipt

The samples were received on 2/25/2026 9:40 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 1.7°C.

### PFAS

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

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# Detection Summary

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

Job ID: 380-199953-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

**Client Sample ID: AIEA GULCH WELLS PUMP 1**  
**PWSID Number: HI0000331**

**Lab Sample ID: 380-199953-1**

No Detections.

**Client Sample ID: FB: AIEA GULCH WELLS PUMP 1**

**Lab Sample ID: 380-199953-2**

No Detections.

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This Detection Summary does not include radiochemical test results.

# Client Sample Results

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

Job ID: 380-199953-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

**Client Sample ID: AIEA GULCH WELLS PUMP 1**

**Lab Sample ID: 380-199953-1**

Date Collected: 02/23/26 11:11

Matrix: Drinking Water

Date Received: 02/25/26 09:40

PWSID Number: HI0000331

**Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 16:57	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	103		50 - 200	02/27/26 14:25	02/28/26 16:57	1
13C6 PFDA	108		50 - 200	02/27/26 14:25	02/28/26 16:57	1
13C5 PFHxA	108		50 - 200	02/27/26 14:25	02/28/26 16:57	1
13C4 PFHpA	107		50 - 200	02/27/26 14:25	02/28/26 16:57	1
13C8 PFOA	114		50 - 200	02/27/26 14:25	02/28/26 16:57	1
13C9 PFNA	112		50 - 200	02/27/26 14:25	02/28/26 16:57	1
13C7 PFUnA	105		50 - 200	02/27/26 14:25	02/28/26 16:57	1
13C2 PFDoA	105		50 - 200	02/27/26 14:25	02/28/26 16:57	1
13C4 PFBA	112		50 - 200	02/27/26 14:25	02/28/26 16:57	1
13C5 PFPeA	112		50 - 200	02/27/26 14:25	02/28/26 16:57	1
13C3 PFBS	109		50 - 200	02/27/26 14:25	02/28/26 16:57	1
13C3 PFHxS	116		50 - 200	02/27/26 14:25	02/28/26 16:57	1
13C8 PFOS	113		50 - 200	02/27/26 14:25	02/28/26 16:57	1

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# Client Sample Results

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

Job ID: 380-199953-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

**Client Sample ID: AIEA GULCH WELLS PUMP 1**

**Lab Sample ID: 380-199953-1**

Date Collected: 02/23/26 11:11

Matrix: Drinking Water

Date Received: 02/25/26 09:40

PWSID Number: HI0000331

**Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-4:2-FTS	115		50 - 200	02/27/26 14:25	02/28/26 16:57	1
13C2-6:2-FTS	112		50 - 200	02/27/26 14:25	02/28/26 16:57	1
13C2-8:2-FTS	109		50 - 200	02/27/26 14:25	02/28/26 16:57	1

**Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 16:53	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 16:53	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 16:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 16:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 16:53	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 16:53	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 16:53	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 16:53	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 16:53	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 16:53	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 16:53	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 16:53	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 16:53	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 16:53	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 16:53	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 16:53	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 16:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 16:53	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
d5-NEtFOSAA	96		70 - 130			02/26/26 12:07	02/27/26 16:53	1
13C2 PFHxA	91		70 - 130			02/26/26 12:07	02/27/26 16:53	1
13C2 PFDA	100		70 - 130			02/26/26 12:07	02/27/26 16:53	1
13C3-GenX	90		70 - 130			02/26/26 12:07	02/27/26 16:53	1

**Client Sample ID: FB: AIEA GULCH WELLS PUMP 1**

**Lab Sample ID: 380-199953-2**

Date Collected: 02/23/26 11:11

Matrix: Water

Date Received: 02/25/26 09:40

**Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1

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# Client Sample Results

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

Job ID: 380-199953-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

**Client Sample ID: FB: AIEA GULCH WELLS PUMP 1**

**Lab Sample ID: 380-199953-2**

Date Collected: 02/23/26 11:11

Matrix: Water

Date Received: 02/25/26 09:40

**Method: EPA 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		02/27/26 14:25	02/28/26 17:18	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	102		50 - 200	02/27/26 14:25	02/28/26 17:18	1
13C6 PFDA	107		50 - 200	02/27/26 14:25	02/28/26 17:18	1
13C5 PFHxA	103		50 - 200	02/27/26 14:25	02/28/26 17:18	1
13C4 PFHpA	116		50 - 200	02/27/26 14:25	02/28/26 17:18	1
13C8 PFOA	117		50 - 200	02/27/26 14:25	02/28/26 17:18	1
13C9 PFNA	113		50 - 200	02/27/26 14:25	02/28/26 17:18	1
13C7 PFUnA	115		50 - 200	02/27/26 14:25	02/28/26 17:18	1
13C2 PFDoA	114		50 - 200	02/27/26 14:25	02/28/26 17:18	1
13C4 PFBA	115		50 - 200	02/27/26 14:25	02/28/26 17:18	1
13C5 PFPeA	116		50 - 200	02/27/26 14:25	02/28/26 17:18	1
13C3 PFBS	110		50 - 200	02/27/26 14:25	02/28/26 17:18	1
13C3 PFHxS	114		50 - 200	02/27/26 14:25	02/28/26 17:18	1
13C8 PFOS	113		50 - 200	02/27/26 14:25	02/28/26 17:18	1
13C2-4:2-FTS	120		50 - 200	02/27/26 14:25	02/28/26 17:18	1
13C2-6:2-FTS	114		50 - 200	02/27/26 14:25	02/28/26 17:18	1
13C2-8:2-FTS	118		50 - 200	02/27/26 14:25	02/28/26 17:18	1

**Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 17:02	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 17:02	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 17:02	1

Eurofins Pomona

# Client Sample Results

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

Job ID: 380-199953-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

**Client Sample ID: FB: AIEA GULCH WELLS PUMP 1**

**Lab Sample ID: 380-199953-2**

Date Collected: 02/23/26 11:11

Matrix: Water

Date Received: 02/25/26 09:40

**Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)**

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 17:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 17:02	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 17:02	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 17:02	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 17:02	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 17:02	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 17:02	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 17:02	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 17:02	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 17:02	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 17:02	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 17:02	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 17:02	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 17:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		02/26/26 12:07	02/27/26 17:02	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
d5-NEtFOSAA	99		70 - 130			02/26/26 12:07	02/27/26 17:02	1
13C2 PFHxA	95		70 - 130			02/26/26 12:07	02/27/26 17:02	1
13C2 PFDA	102		70 - 130			02/26/26 12:07	02/27/26 17:02	1
13C3-GenX	87		70 - 130			02/26/26 12:07	02/27/26 17:02	1

# Action Limit Summary

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

Job ID: 380-199953-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

**Client Sample ID: AIEA GULCH WELLS PUMP 1**

**Lab Sample ID: 380-199953-1**

**PWSID Number: HI0000331**

## Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA

**Client Sample ID: FB: AIEA GULCH WELLS PUMP 1**

**Lab Sample ID: 380-199953-2**

## 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	EPAMCL	RL	Method	Prep Type
				Limit			
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA

# Surrogate Summary

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

Job ID: 380-199953-1  
 SDG: PFAS: Aiea Gulch Wells Pump 1

## Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-199953-1	AIEA GULCH WELLS PUMP 1	96	91	100	90
<b>Surrogate Legend</b>					
d5NEFOS = d5-NEtFOSAA					
PFHxA = 13C2 PFHxA					
PFDA = 13C2 PFDA					
GenX = 13C3-GenX					

## Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-199943-B-1-A MS	Matrix Spike	90	91	100	92
380-199943-C-1-A MSD	Matrix Spike Duplicate	101	95	100	94
380-199953-2	FB: AIEA GULCH WELLS PUMP 1	99	95	102	87
LCS 380-209046/21-A	Lab Control Sample	93	73	97	73
MBL 380-209046/19-A	Method Blank	91	78	98	75
MRL 380-209046/20-A	Lab Control Sample	93	78	95	74
<b>Surrogate Legend</b>					
d5NEFOS = d5-NEtFOSAA					
PFHxA = 13C2 PFHxA					
PFDA = 13C2 PFDA					
GenX = 13C3-GenX					

# Isotope Dilution Summary

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

Job ID: 380-199953-1  
 SDG: PFAS: Aiea Gulch Wells Pump 1

## Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDoA (50-200)
380-199953-1	AIEA GULCH WELLS PUMP 1	103	108	108	107	114	112	105	105

  

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-199953-1	AIEA GULCH WELLS PUMP 1	112	112	109	116	113	115	112	109

**Surrogate Legend**

- HFPODA = 13C3 HFPO-DA
- C6PFDA = 13C6 PFDA
- 13C5PHA = 13C5 PFHxA
- C4PFHA = 13C4 PFHpA
- C8PFOA = 13C8 PFOA
- C9PFNA = 13C9 PFNA
- 13C7PUA = 13C7 PFUnA
- PFDoA = 13C2 PFDoA
- PFBA = 13C4 PFBA
- PFPeA = 13C5 PFPeA
- C3PFBS = 13C3 PFBS
- C3PFHS = 13C3 PFHxS
- C8PFOS = 13C8 PFOS
- 42FTS = 13C2-4:2-FTS
- 62FTS = 13C2-6:2-FTS
- 82FTS = 13C2-8:2-FTS

## Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDoA (50-200)
380-199953-2	FB: AIEA GULCH WELLS PUMP 1	102	107	103	116	117	113	115	114
380-200014-E-1-A MS	Matrix Spike	114	103	109	113	109	106	107	110
380-200014-F-1-A MSD	Matrix Spike Duplicate	109	98	108	111	105	103	104	104
LCS 380-209455/22-A	Lab Control Sample	108	108	111	115	114	106	110	113
MBL 380-209455/20-A	Method Blank	103	106	108	110	114	109	109	106
MRL 380-209455/21-A	Lab Control Sample	106	104	104	112	118	116	108	107

  

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-199953-2	FB: AIEA GULCH WELLS PUMP 1	115	116	110	114	113	120	114	118
380-200014-E-1-A MS	Matrix Spike	113	114	114	111	115	116	105	103
380-200014-F-1-A MSD	Matrix Spike Duplicate	107	113	115	112	111	112	106	105
LCS 380-209455/22-A	Lab Control Sample	116	116	116	115	115	121	110	107
MBL 380-209455/20-A	Method Blank	115	118	118	116	119	128	124	119
MRL 380-209455/21-A	Lab Control Sample	121	122	116	119	122	120	112	114

**Surrogate Legend**

- HFPODA = 13C3 HFPO-DA
- C6PFDA = 13C6 PFDA
- 13C5PHA = 13C5 PFHxA

# Isotope Dilution Summary

Client: City & County of Honolulu

Project/Site: RED-HILL

C4PFHA = 13C4 PFHpA  
C8PFOA = 13C8 PFOA  
C9PFNA = 13C9 PFNA  
13C7PUA = 13C7 PFUnA  
PFDoA = 13C2 PFDoA  
PFBA = 13C4 PFBA  
PFPeA = 13C5 PFPeA  
C3PFBS = 13C3 PFBS  
C3PFHS = 13C3 PFHxS  
C8PFOS = 13C8 PFOS  
42FTS = 13C2-4:2-FTS  
62FTS = 13C2-6:2-FTS  
82FTS = 13C2-8:2-FTS

Job ID: 380-199953-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

- 1
- 2
- 3
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- 17

# QC Sample Results

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

Job ID: 380-199953-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

## Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water

**Lab Sample ID: MBL 380-209455/20-A**  
**Matrix: Water**  
**Analysis Batch: 209622**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 209455**

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		02/27/26 14:25	02/28/26 14:40	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	103		50 - 200	02/27/26 14:25	02/28/26 14:40	1
13C6 PFDA	106		50 - 200	02/27/26 14:25	02/28/26 14:40	1
13C5 PFHxA	108		50 - 200	02/27/26 14:25	02/28/26 14:40	1
13C4 PFHpA	110		50 - 200	02/27/26 14:25	02/28/26 14:40	1
13C8 PFOA	114		50 - 200	02/27/26 14:25	02/28/26 14:40	1
13C9 PFNA	109		50 - 200	02/27/26 14:25	02/28/26 14:40	1
13C7 PFUnA	109		50 - 200	02/27/26 14:25	02/28/26 14:40	1
13C2 PFDoA	106		50 - 200	02/27/26 14:25	02/28/26 14:40	1
13C4 PFBA	115		50 - 200	02/27/26 14:25	02/28/26 14:40	1
13C5 PFPeA	118		50 - 200	02/27/26 14:25	02/28/26 14:40	1
13C3 PFBS	118		50 - 200	02/27/26 14:25	02/28/26 14:40	1
13C3 PFHxS	116		50 - 200	02/27/26 14:25	02/28/26 14:40	1

Eurofins Pomona

# QC Sample Results

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

Job ID: 380-199953-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

## Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

**Lab Sample ID: MBL 380-209455/20-A**  
**Matrix: Water**  
**Analysis Batch: 209622**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 209455**

<i>Isotope Dilution</i>	<i>MBL</i>	<i>MBL</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
	<i>%Recovery</i>	<i>Qualifier</i>				
13C8 PFOS	119		50 - 200	02/27/26 14:25	02/28/26 14:40	1
13C2-4:2-FTS	128		50 - 200	02/27/26 14:25	02/28/26 14:40	1
13C2-6:2-FTS	124		50 - 200	02/27/26 14:25	02/28/26 14:40	1
13C2-8:2-FTS	119		50 - 200	02/27/26 14:25	02/28/26 14:40	1

**Lab Sample ID: LCS 380-209455/22-A**  
**Matrix: Water**  
**Analysis Batch: 209622**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 209455**

<i>Analyte</i>	<i>Spike</i>	<i>LCS</i>	<i>LCS</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec</i>
	<i>Added</i>	<i>Result</i>	<i>Qualifier</i>			<i>Limits</i>	
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.1	54.1		ng/L		90	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.1	51.0		ng/L		85	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.1	57.8		ng/L		96	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.1	56.1		ng/L		93	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.1	51.7		ng/L		86	70 - 130
Perfluorodecanoic acid (PFDA)	60.1	56.9		ng/L		95	70 - 130
Perfluorododecanoic acid (PFDoA)	60.1	57.0		ng/L		95	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.1	56.1		ng/L		93	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.1	55.4		ng/L		92	70 - 130
Perfluorohexanoic acid (PFHxA)	60.1	55.8		ng/L		93	70 - 130
Perfluorononanoic acid (PFNA)	60.1	59.2		ng/L		98	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.1	55.1		ng/L		92	70 - 130
Perfluorooctanoic acid (PFOA)	60.1	59.1		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.1	57.3		ng/L		95	70 - 130
Perfluorobutanoic acid (PFBA)	60.1	55.6		ng/L		92	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.1	57.6		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.1	56.6		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.1	56.2		ng/L		93	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.1	58.2		ng/L		97	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	60.1	54.9		ng/L		91	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.1	56.3		ng/L		94	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.1	56.9		ng/L		95	70 - 130
Perfluoropentanoic acid (PFPeA)	60.1	58.3		ng/L		97	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.1	59.1		ng/L		98	70 - 130

# QC Sample Results

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

Job ID: 380-199953-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

## Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

**Lab Sample ID: LCS 380-209455/22-A**

**Matrix: Water**

**Analysis Batch: 209622**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 209455**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Perfluoropentanesulfonic acid (PFPeS)	60.1	55.6		ng/L		92	70 - 130	
<b>LCS LCS</b>								
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>						<b>Limits</b>
13C3 HFPO-DA	108							50 - 200
13C6 PFDA	108							50 - 200
13C5 PFHxA	111							50 - 200
13C4 PFHpA	115							50 - 200
13C8 PFOA	114							50 - 200
13C9 PFNA	106							50 - 200
13C7 PFUnA	110							50 - 200
13C2 PFDoA	113							50 - 200
13C4 PFBA	116							50 - 200
13C5 PFPeA	116							50 - 200
13C3 PFBS	116							50 - 200
13C3 PFHxS	115							50 - 200
13C8 PFOS	115							50 - 200
13C2-4:2-FTS	121							50 - 200
13C2-6:2-FTS	110							50 - 200
13C2-8:2-FTS	107							50 - 200

**Lab Sample ID: MRL 380-209455/21-A**

**Matrix: Water**

**Analysis Batch: 209622**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 209455**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.00	J	ng/L		100	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	1.81	J	ng/L		90	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.09	J	ng/L		104	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.14	J	ng/L		107	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.09	J	ng/L		104	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.09	J	ng/L		104	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.43	J	ng/L		121	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.13	J	ng/L		106	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	1.96	J	ng/L		98	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.99	J	ng/L		99	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	1.88	J	ng/L		94	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.21	J	ng/L		110	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.24	J	ng/L		112	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	1.94	J	ng/L		97	50 - 150

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# QC Sample Results

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

Job ID: 380-199953-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

## Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

**Lab Sample ID: MRL 380-209455/21-A**  
**Matrix: Water**  
**Analysis Batch: 209622**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 209455**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.21	J	ng/L		110	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.47	J	ng/L		123	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.34	J	ng/L		117	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	2.30	J	ng/L		115	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	2.20	J	ng/L		110	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	1.96	J	ng/L		98	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	2.24	J	ng/L		112	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	106		50 - 200
13C6 PFDA	104		50 - 200
13C5 PFHxA	104		50 - 200
13C4 PFHpA	112		50 - 200
13C8 PFOA	118		50 - 200
13C9 PFNA	116		50 - 200
13C7 PFUnA	108		50 - 200
13C2 PFDoA	107		50 - 200
13C4 PFBA	121		50 - 200
13C5 PFPeA	122		50 - 200
13C3 PFBS	116		50 - 200
13C3 PFHxS	119		50 - 200
13C8 PFOS	122		50 - 200
13C2-4:2-FTS	120		50 - 200
13C2-6:2-FTS	112		50 - 200
13C2-8:2-FTS	114		50 - 200

**Lab Sample ID: 380-200014-E-1-A MS**  
**Matrix: Water**  
**Analysis Batch: 209622**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 209455**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		120	102		ng/L		84	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		120	100		ng/L		83	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	112		ng/L		93	70 - 130

# QC Sample Results

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

Job ID: 380-199953-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

## Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

**Lab Sample ID: 380-200014-E-1-A MS**

**Client Sample ID: Matrix Spike**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 209622**

**Prep Batch: 209455**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Hexafluoropropylene Oxide	<2.0		120	107		ng/L		89	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		120	108		ng/L		89	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0	*5-	120	114		ng/L		95	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0	*5-	120	113		ng/L		94	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		120	115		ng/L		96	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		120	115		ng/L		95	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		120	111		ng/L		92	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		120	115		ng/L		96	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	105		ng/L		88	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		120	116		ng/L		96	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0	*5-	120	114		ng/L		95	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		120	107		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	115		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	115		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	108		ng/L		90	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	109		ng/L		90	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		120	108		ng/L		90	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	112		ng/L		93	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	118		ng/L		98	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		120	113		ng/L		94	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	112		ng/L		93	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	111		ng/L		91	70 - 130

Isotope Dilution	MS MS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	114		50 - 200
13C6 PFDA	103		50 - 200
13C5 PFHxA	109		50 - 200
13C4 PFHpA	113		50 - 200
13C8 PFOA	109		50 - 200
13C9 PFNA	106		50 - 200
13C7 PFUnA	107		50 - 200
13C2 PFDoA	110		50 - 200
13C4 PFBA	113		50 - 200
13C5 PFPeA	114		50 - 200
13C3 PFBS	114		50 - 200
13C3 PFHxS	111		50 - 200
13C8 PFOS	115		50 - 200

# QC Sample Results

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

Job ID: 380-199953-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

## Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

**Lab Sample ID: 380-200014-E-1-A MS**

**Matrix: Water**

**Analysis Batch: 209622**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 209455**

<i>Isotope Dilution</i>	<i>MS</i>	<i>MS</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
13C2-4:2-FTS	116		50 - 200
13C2-6:2-FTS	105		50 - 200
13C2-8:2-FTS	103		50 - 200

**Lab Sample ID: 380-200014-F-1-A MSD**

**Matrix: Water**

**Analysis Batch: 209622**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 209455**

<i>Analyte</i>	<i>Sample</i>	<i>Sample</i>	<i>Spike</i>	<i>MSD</i>	<i>MSD</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec</i>	<i>RPD</i>	<i>RPD</i>
	<i>Result</i>	<i>Qualifier</i>	<i>Added</i>	<i>Result</i>	<i>Qualifier</i>			<i>Limits</i>	<i>Limits</i>	<i>Limit</i>	<i>Limit</i>
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		120	109		ng/L		91	70 - 130	7	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		120	103		ng/L		86	70 - 130	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	111		ng/L		92	70 - 130	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		120	113		ng/L		94	70 - 130	5	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		120	112		ng/L		93	70 - 130	4	30
Perfluorodecanoic acid (PFDA)	<2.0	*5-	120	119		ng/L		99	70 - 130	4	30
Perfluorododecanoic acid (PFDoA)	<2.0	*5-	120	117		ng/L		97	70 - 130	3	30
Perfluoroheptanoic acid (PFHpA)	<2.0		120	114		ng/L		95	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		120	116		ng/L		96	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<2.0		120	109		ng/L		90	70 - 130	2	30
Perfluorononanoic acid (PFNA)	<2.0		120	116		ng/L		96	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	110		ng/L		91	70 - 130	4	30
Perfluorooctanoic acid (PFOA)	<2.0		120	120		ng/L		99	70 - 130	4	30
Perfluoroundecanoic acid (PFUnA)	<2.0	*5-	120	115		ng/L		95	70 - 130	1	30
Perfluorobutanoic acid (PFBA)	<2.0		120	110		ng/L		92	70 - 130	3	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	114		ng/L		94	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	122		ng/L		101	70 - 130	6	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	114		ng/L		95	70 - 130	5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	113		ng/L		94	70 - 130	4	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		120	113		ng/L		94	70 - 130	4	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	119		ng/L		99	70 - 130	6	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	116		ng/L		96	70 - 130	1	30
Perfluoropentanoic acid (PFPeA)	<2.0		120	115		ng/L		95	70 - 130	2	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	115		ng/L		95	70 - 130	3	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	116		ng/L		96	70 - 130	5	30

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# QC Sample Results

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

Job ID: 380-199953-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

## Method: 533 - Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (Continued)

<u>Isotope Dilution</u>	<i>MSD MSD</i>		<u>Limits</u>
	<i>%Recovery</i>	<i>Qualifier</i>	
13C3 HFPO-DA	109		50 - 200
13C6 PFDA	98		50 - 200
13C5 PFHxA	108		50 - 200
13C4 PFHpA	111		50 - 200
13C8 PFOA	105		50 - 200
13C9 PFNA	103		50 - 200
13C7 PFUnA	104		50 - 200
13C2 PFDoA	104		50 - 200
13C4 PFBA	107		50 - 200
13C5 PFPeA	113		50 - 200
13C3 PFBS	115		50 - 200
13C3 PFHxS	112		50 - 200
13C8 PFOS	111		50 - 200
13C2-4:2-FTS	112		50 - 200
13C2-6:2-FTS	106		50 - 200
13C2-8:2-FTS	105		50 - 200

## Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

**Lab Sample ID: MBL 380-209046/19-A**  
**Matrix: Water**  
**Analysis Batch: 209357**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 209046**

<u>Analyte</u>	<i>MBL MBL</i>		<u>RL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
	<i>Result</i>	<i>Qualifier</i>						
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		02/26/26 12:07	02/27/26 12:28	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		02/26/26 12:07	02/27/26 12:28	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		02/26/26 12:07	02/27/26 12:28	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		02/26/26 12:07	02/27/26 12:28	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		02/26/26 12:07	02/27/26 12:28	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		02/26/26 12:07	02/27/26 12:28	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		02/26/26 12:07	02/27/26 12:28	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		02/26/26 12:07	02/27/26 12:28	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		02/26/26 12:07	02/27/26 12:28	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		02/26/26 12:07	02/27/26 12:28	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		02/26/26 12:07	02/27/26 12:28	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		02/26/26 12:07	02/27/26 12:28	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		02/26/26 12:07	02/27/26 12:28	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		02/26/26 12:07	02/27/26 12:28	1
Perfluorotridecanoic acid (PFTTrDA)	<0.36		2.0	ng/L		02/26/26 12:07	02/27/26 12:28	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		02/26/26 12:07	02/27/26 12:28	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		02/26/26 12:07	02/27/26 12:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		02/26/26 12:07	02/27/26 12:28	1

  

<u>Surrogate</u>	<i>MBL MBL</i>		<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
	<i>%Recovery</i>	<i>Qualifier</i>				
d5-NEtFOSAA	91		70 - 130	02/26/26 12:07	02/27/26 12:28	1
13C2 PFHxA	78		70 - 130	02/26/26 12:07	02/27/26 12:28	1
13C2 PFDA	98		70 - 130	02/26/26 12:07	02/27/26 12:28	1

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# QC Sample Results

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

Job ID: 380-199953-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

## Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

**Lab Sample ID: MBL 380-209046/19-A**  
**Matrix: Water**  
**Analysis Batch: 209357**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 209046**

<i>Surrogate</i>	<i>MBL</i>	<i>MBL</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3-GenX	75	Qualifier	70 - 130	02/26/26 12:07	02/27/26 12:28	1

**Lab Sample ID: LCS 380-209046/21-A**  
**Matrix: Water**  
**Analysis Batch: 209357**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 209046**

<i>Analyte</i>	<i>Spike</i>	<i>LCS</i>	<i>LCS</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec</i>	<i>Limits</i>
	<i>Added</i>	<i>Result</i>	<i>Qualifier</i>					
Hexafluoropropylene Oxide	25.0	18.4		ng/L		74		70 - 130
Dimer Acid (HFPO-DA/GenX)								
Perfluorooctanesulfonic acid (PFOS)	25.0	24.2		ng/L		97		70 - 130
Perfluoroundecanoic acid (PFUnA)	25.0	25.9		ng/L		104		70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.0	23.2		ng/L		93		70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.0	23.6		ng/L		95		70 - 130
Perfluorohexanoic acid (PFHxA)	25.0	19.5		ng/L		78		70 - 130
Perfluorododecanoic acid (PFDoA)	25.0	25.6		ng/L		102		70 - 130
Perfluorooctanoic acid (PFOA)	25.0	23.7		ng/L		95		70 - 130
Perfluorodecanoic acid (PFDA)	25.0	23.9		ng/L		95		70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.0	24.9		ng/L		100		70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.0	17.7		ng/L		71		70 - 130
Perfluoroheptanoic acid (PFHpA)	25.0	23.6		ng/L		95		70 - 130
Perfluorononanoic acid (PFNA)	25.0	26.0		ng/L		104		70 - 130
Perfluorotetradecanoic acid (PFTA)	25.0	21.8		ng/L		87		70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.0	25.2		ng/L		101		70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.0	23.7		ng/L		95		70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.0	23.1		ng/L		92		70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.0	21.3		ng/L		85		70 - 130

<i>Surrogate</i>	<i>LCS</i>	<i>LCS</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
d5-NEtFOSAA	93		70 - 130
13C2 PFHxA	73		70 - 130
13C2 PFDA	97		70 - 130
13C3-GenX	73		70 - 130

# QC Sample Results

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

Job ID: 380-199953-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

## Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

**Lab Sample ID: MRL 380-209046/20-A**  
**Matrix: Water**  
**Analysis Batch: 209357**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 209046**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.51	J	ng/L		75	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.18	J	ng/L		109	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.12	J	ng/L		106	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.03	J	ng/L		101	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	1.98	J	ng/L		99	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.64	J	ng/L		82	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.08	J	ng/L		104	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.02	J	ng/L		101	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.31	J	ng/L		116	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.51	J	ng/L		76	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.18	J	ng/L		109	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	1.73	J	ng/L		86	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	1.99	J	ng/L		100	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.05	J	ng/L		102	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.85	J	ng/L		93	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.83	J	ng/L		92	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	93		70 - 130
13C2 PFHxA	78		70 - 130
13C2 PFDA	95		70 - 130
13C3-GenX	74		70 - 130

**Lab Sample ID: 380-199943-B-1-A MS**  
**Matrix: Water**  
**Analysis Batch: 209357**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 209046**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.2	43.7		ng/L		87	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.2	50.7		ng/L		99	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.2	51.1		ng/L		102	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.2	49.3		ng/L		98	70 - 130

Eurofins Pomona





# QC Association Summary

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

Job ID: 380-199953-1  
 SDG: PFAS: Aiea Gulch Wells Pump 1

## LCMS

### Prep Batch: 209046

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-199953-1	AIEA GULCH WELLS PUMP 1	Total/NA	Drinking Water	537.1 DW	
380-199953-2	FB: AIEA GULCH WELLS PUMP 1	Total/NA	Water	537.1 DW	
MBL 380-209046/19-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-209046/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-209046/20-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-199943-B-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-199943-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

### Analysis Batch: 209357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MBL 380-209046/19-A	Method Blank	Total/NA	Water	EPA 537.1 V2	209046
LCS 380-209046/21-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	209046
MRL 380-209046/20-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	209046
380-199943-B-1-A MS	Matrix Spike	Total/NA	Water	EPA 537.1 V2	209046
380-199943-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	EPA 537.1 V2	209046

### Prep Batch: 209455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-199953-1	AIEA GULCH WELLS PUMP 1	Total/NA	Drinking Water	533	
380-199953-2	FB: AIEA GULCH WELLS PUMP 1	Total/NA	Water	533	
MBL 380-209455/20-A	Method Blank	Total/NA	Water	533	
LCS 380-209455/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-209455/21-A	Lab Control Sample	Total/NA	Water	533	
380-200014-E-1-A MS	Matrix Spike	Total/NA	Water	533	
380-200014-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

### Analysis Batch: 209487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-199953-1	AIEA GULCH WELLS PUMP 1	Total/NA	Drinking Water	EPA 537.1 V2	209046
380-199953-2	FB: AIEA GULCH WELLS PUMP 1	Total/NA	Water	EPA 537.1 V2	209046

### Analysis Batch: 209622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-199953-1	AIEA GULCH WELLS PUMP 1	Total/NA	Drinking Water	533	209455
380-199953-2	FB: AIEA GULCH WELLS PUMP 1	Total/NA	Water	533	209455
MBL 380-209455/20-A	Method Blank	Total/NA	Water	533	209455
LCS 380-209455/22-A	Lab Control Sample	Total/NA	Water	533	209455
MRL 380-209455/21-A	Lab Control Sample	Total/NA	Water	533	209455
380-200014-E-1-A MS	Matrix Spike	Total/NA	Water	533	209455
380-200014-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	209455

# Lab Chronicle

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

Job ID: 380-199953-1  
 SDG: PFAS: Aiea Gulch Wells Pump 1

**Client Sample ID: AIEA GULCH WELLS PUMP 1**

**Lab Sample ID: 380-199953-1**

Date Collected: 02/23/26 11:11

Matrix: Drinking Water

Date Received: 02/25/26 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			209455	N8NE	EA POM	02/27/26 14:25
Total/NA	Analysis	533		1	209622	M7ML	EA POM	02/28/26 16:57
Total/NA	Prep	537.1 DW			209046	N8NE	EA POM	02/26/26 12:07
Total/NA	Analysis	EPA 537.1 V2		1	209487	Y5FM	EA POM	02/27/26 16:53

**Client Sample ID: FB: AIEA GULCH WELLS PUMP 1**

**Lab Sample ID: 380-199953-2**

Date Collected: 02/23/26 11:11

Matrix: Water

Date Received: 02/25/26 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			209455	N8NE	EA POM	02/27/26 14:25
Total/NA	Analysis	533		1	209622	M7ML	EA POM	02/28/26 17:18
Total/NA	Prep	537.1 DW			209046	N8NE	EA POM	02/26/26 12:07
Total/NA	Analysis	EPA 537.1 V2		1	209487	Y5FM	EA POM	02/27/26 17:02

**Laboratory References:**

EA POM = Eurofins 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: 380-199953-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

## Laboratory: Eurofins Pomona

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

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	01-31-26 *

- 1
- 2
- 3
- 4
- 5
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- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

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

# Method Summary

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

Job ID: 380-199953-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA POM
EPA 537.1 V2	EPA 537.1 Ver. 2.0 March 2020	EPA	EA POM
533	Extraction of Perfluorinated and Polyfluorinated Alkyl Acids	EPA	EA POM
537.1 DW	Extraction of Perfluorinated Alkyl Acids	EPA	EA POM

**Protocol References:**

EPA = US Environmental Protection Agency

**Laboratory References:**

EA POM = Eurofins 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: 380-199953-1  
SDG: PFAS: Aiea Gulch Wells Pump 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-199953-1	AIEA GULCH WELLS PUMP 1	Drinking Water	02/23/26 11:11	02/25/26 09:40	HI0000331
380-199953-2	FB: AIEA GULCH WELLS PUMP 1	Water	02/23/26 11:11	02/25/26 09:40	

- 1
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- 3
- 4
- 5
- 6
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- 8
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- 11
- 12
- 13
- 14
- 15
- 16
- 17

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

# Chain of Custody Record



<b>Client Information</b> Client Contact: kirk iwamoto Phone: +1 808 748 5840 City & County of Honolulu		Lab Pk: Lopez, Maria E-Mail: Maria.Lopez@eurofins.com PWSID:		Camer Tracking No(s): 380-199953 COC Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): Compliance Project: <input type="checkbox"/> No <input type="checkbox"/> Yes PO #: C20525101 exp 05312023 WO #:		<b>Analysis Requested</b> Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> SUBCONTRACT - 825 PAH Phyle LL (EAL) + TICs 8018B_GRO_LL (MOD) GRO 8018B_DRO_LL_C8 - HNL Ranges: C10-C24/C24-C38/C8-C18 825.2_PREC (MOD) 825plus PLUS TICs 837.1_DW_PREC - 837.1 Full List 833 - All Analytes			
Address: 630 South Beretania Street, Chemistry Lab City: Honolulu State, Zip: HI, 96843 Phone: 808-748-5840 (tel) Email: kiwamoto@hbws.org Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill Site:		Sample Date: 23-Feb-2026 Sample Time: 1111 Sample Type (C-comp, G-grab): G Matrix (W-water, S-solid, O-organic, I-inorganic, A-air): Water		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
<b>Sample Identification</b> Aiea Gulch Wells Pump 1		Sample Date: 23-Feb-2026 Sample Time: 1111 Sample Type (C-comp, G-grab): G Matrix (W-water, S-solid, O-organic, I-inorganic, A-air): Water		Special Instructions/Note: chlorinated	
<b>Possible Hazard Identification</b> <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		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			
<b>Empty Kit Relinquished by</b> Date/Time: 24 Feb 2026 1400 Company: HBWS		Date/Time: 2/25/26 940 Company: EHP		Date/Time: 2/25/26 940 Company: EHP	
Relinquished by:		Date/Time:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks: (631A) 1.5 + 0.2 = 1.7 g/L - 951-90200		Method of Shipment: FEDEX 3555 5007 Date/Time: 2/25/26 940 Company: EHP	



## Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-199953-1  
SDG Number: PFAS: Aiea Gulch Wells Pump 1

**Login Number: 199953**

**List Number: 1**

**Creator: Gross, Drake**

**List Source: Eurofins 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").	N/A	
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	

