

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17

ANALYTICAL REPORT

PREPARED FOR

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

Generated 5/23/2026 4:08:45 PM

JOB DESCRIPTION

RED-HILL
PFAS: Aiea Gulch Wells Pump 1

JOB NUMBER

380-213696-1

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
(626)386-1100

Generated
5/23/2026 4:08:45 PM



Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Detection Summary	6
Client Sample Results	7
Action Limit Summary	11
Surrogate Summary	12
Isotope Dilution Summary	13
QC Sample Results	15
QC Association Summary	26
Lab Chronicle	27
Certification Summary	28
Method Summary	29
Sample Summary	30
Chain of Custody	31
Receipt Checklists	32

Definitions/Glossary

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

Job ID: 380-213696-1
SDG: PFAS: Aiea Gulch Wells Pump 1

Qualifiers

LCMS

Qualifier	Qualifier Description
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.

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: 380-213696-1

Job ID: 380-213696-1

Eurofins Pomona

Job Narrative 380-213696-1

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 5/13/2026 9:28 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 2.6°C.

PFAS

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

Eurofins Pomona

Detection Summary

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

Job ID: 380-213696-1
SDG: PFAS: Aiea Gulch Wells Pump 1

Client Sample ID: AIEA GULCH WELLS PUMP 1
(331-201-TP071)
PWSID Number: HI0000331

Lab Sample ID: 380-213696-1

No Detections.

Client Sample ID: FB: AIEA GULCH WELLS PUMP 1
(331-201-TP071)
PWSID Number: HI0000331

Lab Sample ID: 380-213696-2

No Detections.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

This Detection Summary does not include radiochemical test results.

Client Sample Results

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

Job ID: 380-213696-1
SDG: PFAS: Aiea Gulch Wells Pump 1

**Client Sample ID: AIEA GULCH WELLS PUMP 1
(331-201-TP071)**

Lab Sample ID: 380-213696-1

Date Collected: 05/11/26 10:35

Matrix: Drinking Water

Date Received: 05/13/26 09:28

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-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:44	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	110		50 - 200			05/20/26 06:27	05/22/26 16:44	1
13C6 PFDA	111		50 - 200			05/20/26 06:27	05/22/26 16:44	1
13C5 PFHxA	115		50 - 200			05/20/26 06:27	05/22/26 16:44	1
13C4 PFHpA	116		50 - 200			05/20/26 06:27	05/22/26 16:44	1
13C8 PFOA	114		50 - 200			05/20/26 06:27	05/22/26 16:44	1
13C9 PFNA	116		50 - 200			05/20/26 06:27	05/22/26 16:44	1
13C7 PFUnA	108		50 - 200			05/20/26 06:27	05/22/26 16:44	1
13C2 PFDoA	108		50 - 200			05/20/26 06:27	05/22/26 16:44	1
13C4 PFBA	111		50 - 200			05/20/26 06:27	05/22/26 16:44	1
13C5 PFPeA	117		50 - 200			05/20/26 06:27	05/22/26 16:44	1
13C3 PFBS	113		50 - 200			05/20/26 06:27	05/22/26 16:44	1
13C3 PFHxS	113		50 - 200			05/20/26 06:27	05/22/26 16:44	1

Eurofins Pomona

Client Sample Results

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

Job ID: 380-213696-1
SDG: PFAS: Aiea Gulch Wells Pump 1

**Client Sample ID: AIEA GULCH WELLS PUMP 1
(331-201-TP071)**

Lab Sample ID: 380-213696-1

Date Collected: 05/11/26 10:35

Matrix: Drinking Water

Date Received: 05/13/26 09:28

PWSID Number: HI0000331

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	112		50 - 200	05/20/26 06:27	05/22/26 16:44	1
13C2-4:2-FTS	120		50 - 200	05/20/26 06:27	05/22/26 16:44	1
13C2-6:2-FTS	118		50 - 200	05/20/26 06:27	05/22/26 16:44	1
13C2-8:2-FTS	111		50 - 200	05/20/26 06:27	05/22/26 16:44	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		05/16/26 11:15	05/18/26 08:00	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:00	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:00	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:00	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:00	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:00	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:00	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:00	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:00	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:00	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:00	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:00	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:00	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:00	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:00	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:00	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	115		70 - 130	05/16/26 11:15	05/18/26 08:00	1
13C2 PFHxA	113		70 - 130	05/16/26 11:15	05/18/26 08:00	1
13C2 PFDA	113		70 - 130	05/16/26 11:15	05/18/26 08:00	1
13C3-GenX	109		70 - 130	05/16/26 11:15	05/18/26 08:00	1

**Client Sample ID: FB: AIEA GULCH WELLS PUMP 1
(331-201-TP071)**

Lab Sample ID: 380-213696-2

Date Collected: 05/11/26 10:35

Matrix: Water

Date Received: 05/13/26 09:28

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		05/20/26 06:27	05/22/26 16:54	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1

Eurofins Pomona

Client Sample Results

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

Job ID: 380-213696-1
SDG: PFAS: Aiea Gulch Wells Pump 1

**Client Sample ID: FB: AIEA GULCH WELLS PUMP 1
(331-201-TP071)**

Lab Sample ID: 380-213696-2

Date Collected: 05/11/26 10:35

Matrix: Water

Date Received: 05/13/26 09:28

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		05/20/26 06:27	05/22/26 16:54	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	109		50 - 200	05/20/26 06:27	05/22/26 16:54	1
13C6 PFDA	105		50 - 200	05/20/26 06:27	05/22/26 16:54	1
13C5 PFHxA	114		50 - 200	05/20/26 06:27	05/22/26 16:54	1
13C4 PFHpA	112		50 - 200	05/20/26 06:27	05/22/26 16:54	1
13C8 PFOA	113		50 - 200	05/20/26 06:27	05/22/26 16:54	1
13C9 PFNA	110		50 - 200	05/20/26 06:27	05/22/26 16:54	1
13C7 PFUnA	101		50 - 200	05/20/26 06:27	05/22/26 16:54	1
13C2 PFDoA	97		50 - 200	05/20/26 06:27	05/22/26 16:54	1
13C4 PFBA	111		50 - 200	05/20/26 06:27	05/22/26 16:54	1
13C5 PFPeA	114		50 - 200	05/20/26 06:27	05/22/26 16:54	1
13C3 PFBS	117		50 - 200	05/20/26 06:27	05/22/26 16:54	1
13C3 PFHxS	110		50 - 200	05/20/26 06:27	05/22/26 16:54	1
13C8 PFOS	108		50 - 200	05/20/26 06:27	05/22/26 16:54	1
13C2-4:2-FTS	117		50 - 200	05/20/26 06:27	05/22/26 16:54	1
13C2-6:2-FTS	120		50 - 200	05/20/26 06:27	05/22/26 16:54	1
13C2-8:2-FTS	100		50 - 200	05/20/26 06:27	05/22/26 16:54	1

Client Sample Results

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

Job ID: 380-213696-1
SDG: PFAS: Aiea Gulch Wells Pump 1

**Client Sample ID: FB: AIEA GULCH WELLS PUMP 1
(331-201-TP071)**

Lab Sample ID: 380-213696-2

Date Collected: 05/11/26 10:35

Matrix: Water

Date Received: 05/13/26 09:28

PWSID Number: HI0000331

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		05/16/26 11:15	05/18/26 08:09	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:09	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:09	1
N-methylperfluorooctanesulfonamide cetic acid (NMeFOSAA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:09	1
N-ethylperfluorooctanesulfonamide cetic acid (NEtFOSAA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:09	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:09	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:09	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:09	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:09	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:09	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:09	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:09	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:09	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:09	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:09	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:09	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:09	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 08:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	110		70 - 130			05/16/26 11:15	05/18/26 08:09	1
13C2 PFHxA	106		70 - 130			05/16/26 11:15	05/18/26 08:09	1
13C2 PFDA	113		70 - 130			05/16/26 11:15	05/18/26 08:09	1
13C3-GenX	104		70 - 130			05/16/26 11:15	05/18/26 08:09	1

Action Limit Summary

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

Job ID: 380-213696-1
SDG: PFAS: Aiea Gulch Wells Pump 1

Client Sample ID: AIEA GULCH WELLS PUMP 1
(331-201-TP071)
PWSID Number: HI0000331

Lab Sample ID: 380-213696-1

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	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
(331-201-TP071)
PWSID Number: HI0000331

Lab Sample ID: 380-213696-2

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: 380-213696-1
 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)
380-213696-1	AIEA GULCH WELLS PUMP 1 (331	115	113	113	109

Surrogate Legend

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)
380-213692-E-1-A MS	Matrix Spike	110	115	126	129
380-213692-F-1-A MSD	Matrix Spike Duplicate	107	98	113	122
380-213696-2	FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)	110	106	113	104
LCS 380-227532/23-A	Lab Control Sample	111	121	120	123
MBL 380-227532/21-A	Method Blank	110	116	122	110
MRL 380-227532/22-A	Lab Control Sample	118	117	118	118

Surrogate Legend

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: 380-213696-1
SDG: PFAS: Aiea Gulch Wells Pump 1

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDoA (50-200)
380-213696-1	AIEA GULCH WELLS PUMP 1 (331	110	111	115	116	114	116	108	108

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-213696-1	AIEA GULCH WELLS PUMP 1 (331	111	117	113	113	112	120	118	111

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 PFDaA
- 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

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDoA (50-200)
380-213487-E-7-A MS	Matrix Spike	113	110	114	110	110	108	109	111
380-213487-F-7-A MSD	Matrix Spike Duplicate	119	110	116	113	113	112	113	112
380-213696-2	FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)	109	105	114	112	113	110	101	97
LCS 380-228284/46-A	Lab Control Sample	120	115	116	114	113	114	115	114
MBL 380-228284/44-A	Method Blank	101	106	106	110	110	110	108	108
MRL 380-228284/45-A	Lab Control Sample	104	109	115	106	111	114	110	109

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-213487-E-7-A MS	Matrix Spike	117	112	113	111	112	113	112	108
380-213487-F-7-A MSD	Matrix Spike Duplicate	118	115	115	115	114	113	114	112
380-213696-2	FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)	111	114	117	110	108	117	120	100
LCS 380-228284/46-A	Lab Control Sample	74	116	118	114	116	115	109	114
MBL 380-228284/44-A	Method Blank	110	116	115	111	113	117	115	109
MRL 380-228284/45-A	Lab Control Sample	60	111	115	111	114	109	111	109

Surrogate Legend

- HFPODA = 13C3 HFPO-DA
- C6PFDA = 13C6 PFDA

Isotope Dilution Summary

Client: City & County of Honolulu

Project/Site: RED-HILL

Job ID: 380-213696-1
SDG: PFAS: Aiea Gulch Wells Pump 1

- 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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

QC Sample Results

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

Job ID: 380-213696-1
SDG: PFAS: Aiea Gulch Wells Pump 1

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

Lab Sample ID: MBL 380-228284/44-A
Matrix: Water
Analysis Batch: 229023

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 228284

Analyte	MBL	MBL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		05/20/26 06:27	05/23/26 00:56	1

Isotope Dilution	MBL	MBL	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C3 HFPO-DA	101		50 - 200	05/20/26 06:27	05/23/26 00:56	1
13C6 PFDA	106		50 - 200	05/20/26 06:27	05/23/26 00:56	1
13C5 PFHxA	106		50 - 200	05/20/26 06:27	05/23/26 00:56	1
13C4 PFHpA	110		50 - 200	05/20/26 06:27	05/23/26 00:56	1
13C8 PFOA	110		50 - 200	05/20/26 06:27	05/23/26 00:56	1
13C9 PFNA	110		50 - 200	05/20/26 06:27	05/23/26 00:56	1
13C7 PFUnA	108		50 - 200	05/20/26 06:27	05/23/26 00:56	1
13C2 PFDoA	108		50 - 200	05/20/26 06:27	05/23/26 00:56	1
13C4 PFBA	110		50 - 200	05/20/26 06:27	05/23/26 00:56	1
13C5 PFPeA	116		50 - 200	05/20/26 06:27	05/23/26 00:56	1
13C3 PFBS	115		50 - 200	05/20/26 06:27	05/23/26 00:56	1
13C3 PFHxS	111		50 - 200	05/20/26 06:27	05/23/26 00:56	1

Eurofins Pomona

QC Sample Results

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

Job ID: 380-213696-1
SDG: PFAS: Aiea Gulch Wells Pump 1

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

Lab Sample ID: MBL 380-228284/44-A
Matrix: Water
Analysis Batch: 229023

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 228284

Isotope Dilution	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C8 PFOS	113		50 - 200	05/20/26 06:27	05/23/26 00:56	1
13C2-4:2-FTS	117		50 - 200	05/20/26 06:27	05/23/26 00:56	1
13C2-6:2-FTS	115		50 - 200	05/20/26 06:27	05/23/26 00:56	1
13C2-8:2-FTS	109		50 - 200	05/20/26 06:27	05/23/26 00:56	1

Lab Sample ID: LCS 380-228284/46-A
Matrix: Water
Analysis Batch: 229023

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 228284

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	101		ng/L		84	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	105		ng/L		87	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	101		ng/L		84	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	107		ng/L		89	70 - 130
Perfluorodecanoic acid (PFDA)	120	106		ng/L		89	70 - 130
Perfluorododecanoic acid (PFDoA)	120	103		ng/L		85	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	108		ng/L		90	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	106		ng/L		88	70 - 130
Perfluorohexanoic acid (PFHxA)	120	106		ng/L		89	70 - 130
Perfluorononanoic acid (PFNA)	120	104		ng/L		87	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	105		ng/L		87	70 - 130
Perfluorooctanoic acid (PFOA)	120	107		ng/L		89	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	105		ng/L		87	70 - 130
Perfluorobutanoic acid (PFBA)	120	109		ng/L		90	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	109		ng/L		91	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	109		ng/L		91	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	118		ng/L		99	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	108		ng/L		90	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	120	98.5		ng/L		82	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	105		ng/L		87	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	104		ng/L		87	70 - 130
Perfluoropentanoic acid (PFPeA)	120	103		ng/L		85	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	107		ng/L		89	70 - 130

QC Sample Results

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

Job ID: 380-213696-1
SDG: PFAS: Aiea Gulch Wells Pump 1

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

Lab Sample ID: LCS 380-228284/46-A

Matrix: Water

Analysis Batch: 229023

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 228284

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	120	109		ng/L		90	70 - 130
LCS LCS							
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	120		50 - 200				
13C6 PFDA	115		50 - 200				
13C5 PFHxA	116		50 - 200				
13C4 PFHpA	114		50 - 200				
13C8 PFOA	113		50 - 200				
13C9 PFNA	114		50 - 200				
13C7 PFUnA	115		50 - 200				
13C2 PFDoA	114		50 - 200				
13C4 PFBA	74		50 - 200				
13C5 PFPeA	116		50 - 200				
13C3 PFBS	118		50 - 200				
13C3 PFHxS	114		50 - 200				
13C8 PFOS	116		50 - 200				
13C2-4:2-FTS	115		50 - 200				
13C2-6:2-FTS	109		50 - 200				
13C2-8:2-FTS	114		50 - 200				

Lab Sample ID: MRL 380-228284/45-A

Matrix: Water

Analysis Batch: 229023

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 228284

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.62	J	ng/L		81	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	1.73	J	ng/L		86	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.92	J	ng/L		96	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.92	J	ng/L		96	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.72	J	ng/L		86	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	1.88	J	ng/L		94	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	1.98	J	ng/L		99	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.07	J	ng/L		103	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	1.81	J	ng/L		90	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.84	J	ng/L		92	50 - 150
Perfluorononanoic acid (PFNA)	2.00	1.90	J	ng/L		95	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	1.80	J	ng/L		90	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	1.81	J	ng/L		90	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	1.93	J	ng/L		96	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	1.96	J	ng/L		98	50 - 150

Eurofins Pomona

QC Sample Results

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

Job ID: 380-213696-1
SDG: PFAS: Aiea Gulch Wells Pump 1

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

Lab Sample ID: MRL 380-228284/45-A
Matrix: Water
Analysis Batch: 229023

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 228284

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	1.98	J	ng/L		99	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.38	J	ng/L		119	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	1.92	J	ng/L		96	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	1.70	J	ng/L		85	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.00	1.83	J	ng/L		91	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	1.97	J	ng/L		98	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	1.78	J	ng/L		89	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.00	J	ng/L		100	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	1.86	J	ng/L		93	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	1.86	J	ng/L		93	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	104		50 - 200
13C6 PFDA	109		50 - 200
13C5 PFHxA	115		50 - 200
13C4 PFHpA	106		50 - 200
13C8 PFOA	111		50 - 200
13C9 PFNA	114		50 - 200
13C7 PFUnA	110		50 - 200
13C2 PFDoA	109		50 - 200
13C4 PFBA	60		50 - 200
13C5 PFPeA	111		50 - 200
13C3 PFBS	115		50 - 200
13C3 PFHxS	111		50 - 200
13C8 PFOS	114		50 - 200
13C2-4:2-FTS	109		50 - 200
13C2-6:2-FTS	111		50 - 200
13C2-8:2-FTS	109		50 - 200

Lab Sample ID: 380-213487-E-7-A MS
Matrix: Water
Analysis Batch: 229023

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 228284

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	106		ng/L		88	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		120	108		ng/L		90	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	108		ng/L		90	70 - 130

QC Sample Results

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

Job ID: 380-213696-1
SDG: PFAS: Aiea Gulch Wells Pump 1

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

Lab Sample ID: 380-213487-E-7-A MS

Client Sample ID: Matrix Spike

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 229023

Prep Batch: 228284

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Hexafluoropropylene Oxide	<2.0		120	109		ng/L		91	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	3.8		120	111		ng/L		89	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		120	108		ng/L		89	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		120	105		ng/L		87	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		120	109		ng/L		89	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		120	111		ng/L		92	70 - 130
Perfluorohexanoic acid (PFHxA)	5.5		120	109		ng/L		86	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		120	108		ng/L		90	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	107		ng/L		89	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		120	107		ng/L		88	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		120	108		ng/L		90	70 - 130
Perfluorobutanoic acid (PFBA)	21		120	124		ng/L		86	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	109		ng/L		90	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	109		ng/L		90	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	105		ng/L		87	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	91.5		ng/L		76	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		120	107		ng/L		89	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	109		ng/L		91	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	109		ng/L		91	70 - 130
Perfluoropentanoic acid (PFPeA)	6.1		120	116		ng/L		92	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	108		ng/L		90	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	109		ng/L		90	70 - 130

Isotope Dilution	MS MS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	113		50 - 200
13C6 PFDA	110		50 - 200
13C5 PFHxA	114		50 - 200
13C4 PFHpA	110		50 - 200
13C8 PFOA	110		50 - 200
13C9 PFNA	108		50 - 200
13C7 PFUnA	109		50 - 200
13C2 PFDoA	111		50 - 200
13C4 PFBA	117		50 - 200
13C5 PFPeA	112		50 - 200
13C3 PFBS	113		50 - 200
13C3 PFHxS	111		50 - 200
13C8 PFOS	112		50 - 200

QC Sample Results

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

Job ID: 380-213696-1
SDG: PFAS: Aiea Gulch Wells Pump 1

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

Lab Sample ID: 380-213487-E-7-A MS
Matrix: Water
Analysis Batch: 229023

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 228284

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
13C2-4:2-FTS	113		50 - 200
13C2-6:2-FTS	112		50 - 200
13C2-8:2-FTS	108		50 - 200

Lab Sample ID: 380-213487-F-7-A MSD
Matrix: Water
Analysis Batch: 229023

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 228284

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		120	103		ng/L		86	70 - 130	2	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		120	104		ng/L		87	70 - 130	4	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	107		ng/L		89	70 - 130	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		120	109		ng/L		90	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	3.8		120	112		ng/L		90	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		120	111		ng/L		92	70 - 130	3	30
Perfluorododecanoic acid (PFDoA)	<2.0		120	105		ng/L		87	70 - 130	0	30
Perfluoroheptanoic acid (PFHpA)	<2.0		120	106		ng/L		87	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		120	108		ng/L		90	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	5.5		120	112		ng/L		88	70 - 130	2	30
Perfluorononanoic acid (PFNA)	<2.0		120	108		ng/L		90	70 - 130	0	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	107		ng/L		89	70 - 130	0	30
Perfluorooctanoic acid (PFOA)	<2.0		120	105		ng/L		86	70 - 130	2	30
Perfluoroundecanoic acid (PFUnA)	<2.0		120	108		ng/L		90	70 - 130	0	30
Perfluorobutanoic acid (PFBA)	21		120	125		ng/L		86	70 - 130	1	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	105		ng/L		87	70 - 130	4	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	110		ng/L		91	70 - 130	1	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	105		ng/L		87	70 - 130	0	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	111		ng/L		92	70 - 130	19	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		120	105		ng/L		88	70 - 130	2	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	113		ng/L		94	70 - 130	4	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	104		ng/L		86	70 - 130	5	30
Perfluoropentanoic acid (PFPeA)	6.1		120	113		ng/L		89	70 - 130	3	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	110		ng/L		92	70 - 130	2	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	110		ng/L		91	70 - 130	1	30

Eurofins Pomona

QC Sample Results

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

Job ID: 380-213696-1
SDG: PFAS: Aiea Gulch Wells Pump 1

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

<i>Isotope Dilution</i>	<i>MSD MSD</i>		<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
13C3 HFPO-DA	119		50 - 200
13C6 PFDA	110		50 - 200
13C5 PFHxA	116		50 - 200
13C4 PFHpA	113		50 - 200
13C8 PFOA	113		50 - 200
13C9 PFNA	112		50 - 200
13C7 PFUnA	113		50 - 200
13C2 PFDoA	112		50 - 200
13C4 PFBA	118		50 - 200
13C5 PFPeA	115		50 - 200
13C3 PFBS	115		50 - 200
13C3 PFHxS	115		50 - 200
13C8 PFOS	114		50 - 200
13C2-4:2-FTS	113		50 - 200
13C2-6:2-FTS	114		50 - 200
13C2-8:2-FTS	112		50 - 200

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

Lab Sample ID: MBL 380-227532/21-A
Matrix: Water
Analysis Batch: 227732

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 227532

<i>Analyte</i>	<i>MBL MBL</i>		<i>RL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
	<i>Result</i>	<i>Qualifier</i>						
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluorotridecanoic acid (PFTTrDA)	<0.36		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1

<i>Surrogate</i>	<i>MBL MBL</i>		<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
	<i>%Recovery</i>	<i>Qualifier</i>				
d5-NEtFOSAA	110		70 - 130	05/16/26 11:15	05/18/26 06:34	1
13C2 PFHxA	116		70 - 130	05/16/26 11:15	05/18/26 06:34	1
13C2 PFDA	122		70 - 130	05/16/26 11:15	05/18/26 06:34	1

Eurofins Pomona

QC Sample Results

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

Job ID: 380-213696-1
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 380-227532/21-A
Matrix: Water
Analysis Batch: 227732

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 227532

<i>Surrogate</i>	<i>MBL</i>	<i>MBL</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3-GenX	110	Qualifier	70 - 130	05/16/26 11:15	05/18/26 06:34	1

Lab Sample ID: LCS 380-227532/23-A
Matrix: Water
Analysis Batch: 227732

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 227532

<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	50.2	53.5		ng/L		107		70 - 130
Dimer Acid (HFPO-DA/GenX)								
Perfluorooctanesulfonic acid (PFOS)	50.2	52.8		ng/L		105		70 - 130
Perfluoroundecanoic acid (PFUnA)	50.2	55.8		ng/L		111		70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.2	51.4		ng/L		102		70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.2	52.8		ng/L		105		70 - 130
Perfluorohexanoic acid (PFHxA)	50.2	54.4		ng/L		108		70 - 130
Perfluorododecanoic acid (PFDoA)	50.2	54.6		ng/L		109		70 - 130
Perfluorooctanoic acid (PFOA)	50.2	55.0		ng/L		110		70 - 130
Perfluorodecanoic acid (PFDA)	50.2	53.0		ng/L		106		70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.2	51.0		ng/L		102		70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.2	50.5		ng/L		101		70 - 130
Perfluoroheptanoic acid (PFHpA)	50.2	53.6		ng/L		107		70 - 130
Perfluorononanoic acid (PFNA)	50.2	53.4		ng/L		106		70 - 130
Perfluorotetradecanoic acid (PFTA)	50.2	55.1		ng/L		110		70 - 130
Perfluorotridecanoic acid (PFTrDA)	50.2	62.7		ng/L		125		70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	50.2	52.2		ng/L		104		70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	50.2	52.5		ng/L		105		70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.2	51.5		ng/L		103		70 - 130

<i>Surrogate</i>	<i>LCS</i>	<i>LCS</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
d5-NEtFOSAA	111		70 - 130
13C2 PFHxA	121		70 - 130
13C2 PFDA	120		70 - 130
13C3-GenX	123		70 - 130

QC Sample Results

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

Job ID: 380-213696-1
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 380-227532/22-A
Matrix: Water
Analysis Batch: 227732

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 227532

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.40	J	ng/L		120	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.12	J	ng/L		106	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.42	J	ng/L		121	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.14	J	ng/L		107	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.33	J	ng/L		116	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.25	J	ng/L		112	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.28	J	ng/L		114	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.25	J	ng/L		112	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.22	J	ng/L		111	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.01	J	ng/L		100	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.02	J	ng/L		101	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.27	J	ng/L		113	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.24	J	ng/L		112	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.34	J	ng/L		117	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.59	J	ng/L		129	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.18	J	ng/L		109	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.95	J	ng/L		97	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.20	J	ng/L		110	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	118		70 - 130
13C2 PFHxA	117		70 - 130
13C2 PFDA	118		70 - 130
13C3-GenX	118		70 - 130

Lab Sample ID: 380-213692-E-1-A MS
Matrix: Water
Analysis Batch: 227732

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 227532

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	59.7		ng/L		119	70 - 130
Perfluorooctanesulfonic acid (PFOS)	2.6		50.2	57.1		ng/L		108	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.2	57.3		ng/L		114	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.2	53.8		ng/L		107	70 - 130

Eurofins Pomona

QC Sample Results

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

Job ID: 380-213696-1
SDG: PFAS: Aiea Gulch Wells Pump 1

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

Lab Sample ID: 380-213692-E-1-A MS

Client Sample ID: Matrix Spike

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 227732

Prep Batch: 227532

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		50.2	54.1		ng/L		108	70 - 130
Perfluorohexanoic acid (PFHxA)	3.5		50.2	58.9		ng/L		110	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		50.2	58.1		ng/L		116	70 - 130
Perfluorooctanoic acid (PFOA)	2.1		50.2	60.2		ng/L		116	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		50.2	56.7		ng/L		113	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	2.8		50.2	57.3		ng/L		108	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		50.2	55.6		ng/L		108	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		50.2	56.9		ng/L		111	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		50.2	56.2		ng/L		112	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		50.2	60.2		ng/L		120	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0	F1	50.2	66.5	F1	ng/L		132	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.2	55.9		ng/L		111	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.2	54.8		ng/L		109	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.2	58.4		ng/L		116	70 - 130
MS MS									
Surrogate	%Recovery	Qualifier	Limits						
d5-NEtFOSAA	110		70 - 130						
13C2 PFHxA	115		70 - 130						
13C2 PFDA	126		70 - 130						
13C3-GenX	129		70 - 130						

Lab Sample ID: 380-213692-F-1-A MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 227732

Prep Batch: 227532

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	
	Result	Qualifier	Added	Result	Qualifier					RPD	Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.1	54.3		ng/L		108	70 - 130	9	30
Perfluorooctanesulfonic acid (PFOS)	2.6		50.1	54.0		ng/L		103	70 - 130	5	30
Perfluoroundecanoic acid (PFUnA)	<2.0		50.1	53.1		ng/L		106	70 - 130	8	30
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	<2.0		50.1	48.6		ng/L		97	70 - 130	10	30
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		50.1	50.6		ng/L		101	70 - 130	7	30
Perfluorohexanoic acid (PFHxA)	3.5		50.1	55.5		ng/L		104	70 - 130	6	30
Perfluorododecanoic acid (PFDoA)	<2.0		50.1	52.7		ng/L		105	70 - 130	10	30
Perfluorooctanoic acid (PFOA)	2.1		50.1	57.4		ng/L		110	70 - 130	5	30
Perfluorodecanoic acid (PFDA)	<2.0		50.1	51.5		ng/L		103	70 - 130	10	30

Eurofins Pomona

QC Association Summary

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

Job ID: 380-213696-1
SDG: PFAS: Aiea Gulch Wells Pump 1

LCMS

Prep Batch: 227532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-213696-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1 DW	
380-213696-2	FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Water	537.1 DW	
MBL 380-227532/21-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-227532/23-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-227532/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-213692-E-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-213692-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 227732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-213696-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	EPA 537.1 V2	227532
380-213696-2	FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Water	EPA 537.1 V2	227532
MBL 380-227532/21-A	Method Blank	Total/NA	Water	EPA 537.1 V2	227532
LCS 380-227532/23-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	227532
MRL 380-227532/22-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	227532
380-213692-E-1-A MS	Matrix Spike	Total/NA	Water	EPA 537.1 V2	227532
380-213692-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	EPA 537.1 V2	227532

Prep Batch: 228284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-213696-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	
380-213696-2	FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Water	533	
MBL 380-228284/44-A	Method Blank	Total/NA	Water	533	
LCS 380-228284/46-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-228284/45-A	Lab Control Sample	Total/NA	Water	533	
380-213487-E-7-A MS	Matrix Spike	Total/NA	Water	533	
380-213487-F-7-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 229023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MBL 380-228284/44-A	Method Blank	Total/NA	Water	533	228284
LCS 380-228284/46-A	Lab Control Sample	Total/NA	Water	533	228284
MRL 380-228284/45-A	Lab Control Sample	Total/NA	Water	533	228284
380-213487-E-7-A MS	Matrix Spike	Total/NA	Water	533	228284
380-213487-F-7-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	228284

Analysis Batch: 229024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-213696-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	228284
380-213696-2	FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Water	533	228284

Lab Chronicle

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

Job ID: 380-213696-1
 SDG: PFAS: Aiea Gulch Wells Pump 1

**Client Sample ID: AIEA GULCH WELLS PUMP 1
 (331-201-TP071)**

Lab Sample ID: 380-213696-1

Date Collected: 05/11/26 10:35

Matrix: Drinking Water

Date Received: 05/13/26 09:28

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			228284	XTD8	EA POM	05/20/26 06:27
Total/NA	Analysis	533		1	229024	Y5FM	EA POM	05/22/26 16:44
Total/NA	Prep	537.1 DW			227532	E9PK	EA POM	05/16/26 11:15
Total/NA	Analysis	EPA 537.1 V2		1	227732	SZ9R	EA POM	05/18/26 08:00

**Client Sample ID: FB: AIEA GULCH WELLS PUMP 1
 (331-201-TP071)**

Lab Sample ID: 380-213696-2

Date Collected: 05/11/26 10:35

Matrix: Water

Date Received: 05/13/26 09:28

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			228284	XTD8	EA POM	05/20/26 06:27
Total/NA	Analysis	533		1	229024	Y5FM	EA POM	05/22/26 16:54
Total/NA	Prep	537.1 DW			227532	E9PK	EA POM	05/16/26 11:15
Total/NA	Analysis	EPA 537.1 V2		1	227732	SZ9R	EA POM	05/18/26 08:09

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: 380-213696-1
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
- 6
- 7
- 8
- 9
- 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: 380-213696-1
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: 380-213696-1
SDG: PFAS: Aiea Gulch Wells Pump 1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-213696-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Drinking Water	05/11/26 10:35	05/13/26 09:28	HI0000331
380-213696-2	FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Water	05/11/26 10:35	05/13/26 09:28	HI0000331

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-213696-1
SDG Number: PFAS: Aiea Gulch Wells Pump 1

Login Number: 213696

List Number: 1

Creator: Del Rosario, Michael

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	
ClO4 headspace requirement met (>50% for CA, >30% for other states).	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

