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ANALYTICAL REPORT

PREPARED FOR

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

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JOB DESCRIPTION

RED-HILL
PFAS: Aiea Gulch Wells Pump 2
RUSH Weekly Red Hill

JOB NUMBER

380-212282-1

Eurofins Pomona

Job Notes

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

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

Job ID: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

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: 380-212282-1

Job ID: 380-212282-1

Eurofins Pomona

Job Narrative 380-212282-1

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 5/6/2026 9:18 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.7°C and 3.1°C.

PFAS

Method 533: The following QC issues in preparation batch 380-227305 and analytical batch 380-227473 were observed:

Surrogate 13C6 PFDA, 13C9 PFNA and 13C7 PFUnA recovery for the following field blank sample: FB: AIEA GULCH WELLS PUMP 2 (331-202-TP072) (380-212282-2) was below method limits (low bias). Extracts were re-analyzed for confirmation. Field blank sample FB: AIEA GULCH WELLS PUMP 2 (331-202-TP072) (380-212282-2) has no volume available for re-extraction. The FRB result is not acceptable per method; however, analysis of the Field Blank is required only if the field sample contains a method analyte or analytes at, or above, the MRL. Sample results showed non detect thus valid for reporting. (XWB4)

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: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

**Client Sample ID: AIEA GULCH WELLS PUMP 2
(331-202-TP072)**
PWSID Number: HI0000331

Lab Sample ID: 380-212282-1

No Detections.

**Client Sample ID: FB: AIEA GULCH WELLS PUMP 2
(331-202-TP072)**
PWSID Number: HI0000331

Lab Sample ID: 380-212282-2

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: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

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

Lab Sample ID: 380-212282-1

Date Collected: 05/04/26 11:32

Matrix: Drinking Water

Date Received: 05/06/26 21:18

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-Chloroeicosfluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		05/15/26 06:23	05/15/26 20:18	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	100		50 - 200	05/15/26 06:23	05/15/26 20:18	1
13C6 PFDA	87		50 - 200	05/15/26 06:23	05/15/26 20:18	1
13C5 PFHxA	106		50 - 200	05/15/26 06:23	05/15/26 20:18	1
13C4 PFHpA	101		50 - 200	05/15/26 06:23	05/15/26 20:18	1
13C8 PFOA	103		50 - 200	05/15/26 06:23	05/15/26 20:18	1
13C9 PFNA	97		50 - 200	05/15/26 06:23	05/15/26 20:18	1
13C7 PFUnA	87		50 - 200	05/15/26 06:23	05/15/26 20:18	1
13C2 PFDoA	85		50 - 200	05/15/26 06:23	05/15/26 20:18	1
13C4 PFBA	97		50 - 200	05/15/26 06:23	05/15/26 20:18	1
13C5 PFPeA	98		50 - 200	05/15/26 06:23	05/15/26 20:18	1
13C3 PFBS	106		50 - 200	05/15/26 06:23	05/15/26 20:18	1
13C3 PFHxS	105		50 - 200	05/15/26 06:23	05/15/26 20:18	1

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Client Sample Results

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

Job ID: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

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

Lab Sample ID: 380-212282-1

Date Collected: 05/04/26 11:32
Date Received: 05/06/26 21:18

Matrix: Drinking Water
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	99		50 - 200	05/15/26 06:23	05/15/26 20:18	1
13C2-4:2-FTS	107		50 - 200	05/15/26 06:23	05/15/26 20:18	1
13C2-6:2-FTS	96		50 - 200	05/15/26 06:23	05/15/26 20:18	1
13C2-8:2-FTS	79		50 - 200	05/15/26 06:23	05/15/26 20:18	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		05/10/26 10:50	05/11/26 11:49	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:49	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:49	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:49	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:49	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:49	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:49	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:49	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:49	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:49	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:49	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:49	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:49	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:49	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:49	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:49	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	106		70 - 130	05/10/26 10:50	05/11/26 11:49	1
13C2 PFHxA	105		70 - 130	05/10/26 10:50	05/11/26 11:49	1
13C2 PFDA	107		70 - 130	05/10/26 10:50	05/11/26 11:49	1
13C3-GenX	105		70 - 130	05/10/26 10:50	05/11/26 11:49	1

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

Lab Sample ID: 380-212282-2

Date Collected: 05/04/26 11:32
Date Received: 05/06/26 21:18

Matrix: Water
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		05/10/26 10:50	05/11/26 11:58	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:58	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:58	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:58	1

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Client Sample Results

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

Job ID: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

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

Lab Sample ID: 380-212282-2

Date Collected: 05/04/26 11:32

Matrix: Water

Date Received: 05/06/26 21:18

PWSID Number: HI0000331

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-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:58	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:58	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:58	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:58	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:58	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:58	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:58	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:58	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:58	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:58	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:58	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:58	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		05/10/26 10:50	05/11/26 11:58	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	93		70 - 130			05/10/26 10:50	05/11/26 11:58	1
13C2 PFHxA	105		70 - 130			05/10/26 10:50	05/11/26 11:58	1
13C2 PFDA	108		70 - 130			05/10/26 10:50	05/11/26 11:58	1
13C3-GenX	98		70 - 130			05/10/26 10:50	05/11/26 11:58	1

Action Limit Summary

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

Job ID: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

Client Sample ID: AIEA GULCH WELLS PUMP 2
(331-202-TP072)
PWSID Number: HI0000331

Lab Sample ID: 380-212282-1

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 2
(331-202-TP072)
PWSID Number: HI0000331

Lab Sample ID: 380-212282-2

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	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: 380-212282-1
 SDG: PFAS: Aiea Gulch Wells Pump 2

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)
380-212282-1	AIEA GULCH WELLS PUMP 2 (	106	105	107	105

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)
380-212282-2	FB: AIEA GULCH WELLS PUMf	93	105	108	98
380-212302-B-1-A MS	Matrix Spike	105	105	111	112
380-212302-C-1-A MSD	Matrix Spike Duplicate	105	103	110	109
LCS 380-225988/23-A	Lab Control Sample	98	99	104	96
MBL 380-225988/21-A	Method Blank	116	117	117	114
MRL 380-225988/22-A	Lab Control Sample	97	105	110	99

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: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

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)	PFDaA (50-200)
380-212282-1	AIEA GULCH WELLS PUMP 2 (	100	87	106	101	103	97	87	85

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)
380-212282-1	AIEA GULCH WELLS PUMP 2 (	97	98	106	105	99	107	96	79

Surrogate Legend

- HFPODA = 13C3 HFPO-DA
- C6PFDA = 13C6 PFDA
- 13C5PHA = 13C5 PFHxA
- C4PFHA = 13C4 PFHpA
- C8PFOA = 13C8 PFOA
- C9PFNA = 13C9 PFNA
- 13C7PUA = 13C7 PFUnA
- PFDaA = 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

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)	PFDaA (50-200)
380-212210-B-1-A MS	Matrix Spike	108	104	116	111	107	108	108	106
380-212210-C-1-A MSD	Matrix Spike Duplicate	110	101	117	113	109	107	107	111
LCS 380-227305/22-A	Lab Control Sample	100	98	110	103	102	100	100	101
MBL 380-227305/20-A	Method Blank	91	100	103	100	100	100	100	107
MRL 380-227305/21-A	Lab Control Sample	86	90	96	96	94	91	94	97

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)
380-212210-B-1-A MS	Matrix Spike	109	109	110	117	111	106	104	94
380-212210-C-1-A MSD	Matrix Spike Duplicate	109	107	115	116	111	109	103	94
LCS 380-227305/22-A	Lab Control Sample	89	101	109	114	103	108	98	88
MBL 380-227305/20-A	Method Blank	95	99	120	115	115	121	107	97
MRL 380-227305/21-A	Lab Control Sample	73	90	116	117	112	111	100	90

Surrogate Legend

- HFPODA = 13C3 HFPO-DA
- C6PFDA = 13C6 PFDA
- 13C5PHA = 13C5 PFHxA
- C4PFHA = 13C4 PFHpA
- C8PFOA = 13C8 PFOA

Isotope Dilution Summary

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

Job ID: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

- 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
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- 17

QC Sample Results

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

Job ID: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

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

Lab Sample ID: MBL 380-227305/20-A
Matrix: Water
Analysis Batch: 227473

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 227305

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		05/15/26 06:23	05/15/26 17:10	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	91		50 - 200	05/15/26 06:23	05/15/26 17:10	1
13C6 PFDA	100		50 - 200	05/15/26 06:23	05/15/26 17:10	1
13C5 PFHxA	103		50 - 200	05/15/26 06:23	05/15/26 17:10	1
13C4 PFHpA	100		50 - 200	05/15/26 06:23	05/15/26 17:10	1
13C8 PFOA	100		50 - 200	05/15/26 06:23	05/15/26 17:10	1
13C9 PFNA	100		50 - 200	05/15/26 06:23	05/15/26 17:10	1
13C7 PFUnA	100		50 - 200	05/15/26 06:23	05/15/26 17:10	1
13C2 PFDoA	107		50 - 200	05/15/26 06:23	05/15/26 17:10	1
13C4 PFBA	95		50 - 200	05/15/26 06:23	05/15/26 17:10	1
13C5 PFPeA	99		50 - 200	05/15/26 06:23	05/15/26 17:10	1
13C3 PFBS	120		50 - 200	05/15/26 06:23	05/15/26 17:10	1
13C3 PFHxS	115		50 - 200	05/15/26 06:23	05/15/26 17:10	1

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QC Sample Results

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

Job ID: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

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

Lab Sample ID: MBL 380-227305/20-A
Matrix: Water
Analysis Batch: 227473

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 227305

<i>Isotope Dilution</i>	<i>MBL %Recovery</i>	<i>MBL Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C8 PFOS	115		50 - 200	05/15/26 06:23	05/15/26 17:10	1
13C2-4:2-FTS	121		50 - 200	05/15/26 06:23	05/15/26 17:10	1
13C2-6:2-FTS	107		50 - 200	05/15/26 06:23	05/15/26 17:10	1
13C2-8:2-FTS	97		50 - 200	05/15/26 06:23	05/15/26 17:10	1

Lab Sample ID: LCS 380-227305/22-A
Matrix: Water
Analysis Batch: 227473

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 227305

<i>Analyte</i>	<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.1	60.6		ng/L		101	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.1	60.9		ng/L		101	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.1	58.1		ng/L		97	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.1	61.4		ng/L		102	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.1	59.5		ng/L		99	70 - 130
Perfluorodecanoic acid (PFDA)	60.1	59.3		ng/L		99	70 - 130
Perfluorododecanoic acid (PFDoA)	60.1	59.5		ng/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.1	58.7		ng/L		98	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.1	56.7		ng/L		94	70 - 130
Perfluorohexanoic acid (PFHxA)	60.1	55.3		ng/L		92	70 - 130
Perfluorononanoic acid (PFNA)	60.1	60.4		ng/L		101	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.1	59.4		ng/L		99	70 - 130
Perfluorooctanoic acid (PFOA)	60.1	58.9		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.1	56.0		ng/L		93	70 - 130
Perfluorobutanoic acid (PFBA)	60.1	57.9		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.1	61.7		ng/L		103	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.1	59.5		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.1	58.9		ng/L		98	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.1	57.0		ng/L		95	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.1	59.2		ng/L		99	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.1	65.6		ng/L		109	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.1	58.2		ng/L		97	70 - 130
Perfluoropentanoic acid (PFPeA)	60.1	59.0		ng/L		98	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.1	60.5		ng/L		101	70 - 130

QC Sample Results

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

Job ID: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

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

Lab Sample ID: LCS 380-227305/22-A
Matrix: Water
Analysis Batch: 227473

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 227305

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	60.1	55.8		ng/L		93	70 - 130
LCS LCS							
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	100		50 - 200				
13C6 PFDA	98		50 - 200				
13C5 PFHxA	110		50 - 200				
13C4 PFHpA	103		50 - 200				
13C8 PFOA	102		50 - 200				
13C9 PFNA	100		50 - 200				
13C7 PFUnA	100		50 - 200				
13C2 PFDoA	101		50 - 200				
13C4 PFBA	89		50 - 200				
13C5 PFPeA	101		50 - 200				
13C3 PFBS	109		50 - 200				
13C3 PFHxS	114		50 - 200				
13C8 PFOS	103		50 - 200				
13C2-4:2-FTS	108		50 - 200				
13C2-6:2-FTS	98		50 - 200				
13C2-8:2-FTS	88		50 - 200				

Lab Sample ID: MRL 380-227305/21-A
Matrix: Water
Analysis Batch: 227473

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 227305

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.10	J	ng/L		105	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	1.99	J	ng/L		99	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.93	J	ng/L		96	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.18	J	ng/L		109	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.15	J	ng/L		108	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.17	J	ng/L		108	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.21	J	ng/L		110	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	1.99	J	ng/L		99	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.92	J	ng/L		96	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.17	J	ng/L		108	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	1.91	J	ng/L		96	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.08	J	ng/L		104	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.00	J	ng/L		100	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.01	J	ng/L		100	50 - 150

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QC Sample Results

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

Job ID: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

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

Lab Sample ID: MRL 380-227305/21-A
Matrix: Water
Analysis Batch: 227473

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 227305

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.27	J	ng/L		113	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.33	J	ng/L		116	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.44	J	ng/L		122	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	2.11	J	ng/L		105	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.00	2.15	J	ng/L		107	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.57	J	ng/L		128	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	2.11	J	ng/L		105	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	1.85	J	ng/L		92	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	2.08	J	ng/L		104	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	86		50 - 200
13C6 PFDA	90		50 - 200
13C5 PFHxA	96		50 - 200
13C4 PFHpA	96		50 - 200
13C8 PFOA	94		50 - 200
13C9 PFNA	91		50 - 200
13C7 PFUnA	94		50 - 200
13C2 PFDoA	97		50 - 200
13C4 PFBA	73		50 - 200
13C5 PFPeA	90		50 - 200
13C3 PFBS	116		50 - 200
13C3 PFHxS	117		50 - 200
13C8 PFOS	112		50 - 200
13C2-4:2-FTS	111		50 - 200
13C2-6:2-FTS	100		50 - 200
13C2-8:2-FTS	90		50 - 200

Lab Sample ID: 380-212210-B-1-A MS
Matrix: Water
Analysis Batch: 227473

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 227305

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		60.2	58.4		ng/L		97	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.2	57.8		ng/L		96	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.2	58.1		ng/L		96	70 - 130

QC Sample Results

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

Job ID: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

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

Lab Sample ID: 380-212210-B-1-A MS
Matrix: Water
Analysis Batch: 227473

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 227305

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		60.2	61.4		ng/L		102	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.2	59.8		ng/L		98	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		60.2	56.6		ng/L		94	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.2	57.9		ng/L		96	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		60.2	57.6		ng/L		94	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.2	58.0		ng/L		94	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		60.2	55.6		ng/L		90	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.2	57.7		ng/L		96	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.2	58.2		ng/L		94	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		60.2	56.7		ng/L		93	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.2	54.4		ng/L		90	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		60.2	59.8		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.2	61.7		ng/L		102	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.2	64.1		ng/L		106	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.2	58.9		ng/L		98	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.2	58.6		ng/L		97	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.2	59.7		ng/L		99	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.2	56.7		ng/L		94	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.2	60.7		ng/L		101	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		60.2	59.1		ng/L		96	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.2	57.6		ng/L		96	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.2	53.9		ng/L		89	70 - 130

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
13C3 HFPO-DA	108		50 - 200
13C6 PFDA	104		50 - 200
13C5 PFHxA	116		50 - 200
13C4 PFHpA	111		50 - 200
13C8 PFOA	107		50 - 200
13C9 PFNA	108		50 - 200
13C7 PFUnA	108		50 - 200
13C2 PFDoA	106		50 - 200
13C4 PFBA	109		50 - 200
13C5 PFPeA	109		50 - 200
13C3 PFBS	110		50 - 200
13C3 PFHxS	117		50 - 200
13C8 PFOS	111		50 - 200

QC Sample Results

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

Job ID: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

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

Lab Sample ID: 380-212210-B-1-A MS
Matrix: Water
Analysis Batch: 227473

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 227305

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
13C2-4:2-FTS	106		50 - 200
13C2-6:2-FTS	104		50 - 200
13C2-8:2-FTS	94		50 - 200

Lab Sample ID: 380-212210-C-1-A MSD
Matrix: Water
Analysis Batch: 227473

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 227305

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.2	58.4		ng/L		97	70 - 130	0	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.2	55.6		ng/L		92	70 - 130	4	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.2	58.6		ng/L		97	70 - 130	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.2	60.3		ng/L		100	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.2	58.8		ng/L		97	70 - 130	2	30
Perfluorodecanoic acid (PFDA)	<2.0		60.2	59.0		ng/L		98	70 - 130	4	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.2	55.8		ng/L		93	70 - 130	4	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.2	58.0		ng/L		95	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.2	59.4		ng/L		96	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		60.2	57.7		ng/L		94	70 - 130	4	30
Perfluorononanoic acid (PFNA)	<2.0		60.2	56.5		ng/L		94	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.2	59.6		ng/L		96	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	<2.0		60.2	58.6		ng/L		96	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.2	54.3		ng/L		90	70 - 130	0	30
Perfluorobutanoic acid (PFBA)	<2.0		60.2	58.7		ng/L		95	70 - 130	2	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.2	58.7		ng/L		97	70 - 130	5	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.2	63.6		ng/L		106	70 - 130	1	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.2	60.3		ng/L		100	70 - 130	2	30
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.2	56.6		ng/L		94	70 - 130	3	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.2	59.9		ng/L		99	70 - 130	0	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.2	55.9		ng/L		93	70 - 130	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.2	59.4		ng/L		99	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)	<2.0		60.2	59.1		ng/L		96	70 - 130	0	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.2	57.8		ng/L		96	70 - 130	0	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.2	55.7		ng/L		92	70 - 130	3	30

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QC Sample Results

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

Job ID: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

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

<i>Isotope Dilution</i>	<i>MSD</i>	<i>MSD</i>	<i>Limits</i>
<i>%Recovery</i>	<i>Qualifier</i>		
13C3 HFPO-DA	110		50 - 200
13C6 PFDA	101		50 - 200
13C5 PFHxA	117		50 - 200
13C4 PFHpA	113		50 - 200
13C8 PFOA	109		50 - 200
13C9 PFNA	107		50 - 200
13C7 PFUnA	107		50 - 200
13C2 PFDoA	111		50 - 200
13C4 PFBA	109		50 - 200
13C5 PFPeA	107		50 - 200
13C3 PFBS	115		50 - 200
13C3 PFHxS	116		50 - 200
13C8 PFOS	111		50 - 200
13C2-4:2-FTS	109		50 - 200
13C2-6:2-FTS	103		50 - 200
13C2-8:2-FTS	94		50 - 200

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

Lab Sample ID: MBL 380-225988/21-A
Matrix: Water
Analysis Batch: 226117

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 225988

<i>Analyte</i>	<i>MBL</i>	<i>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		05/10/26 10:50	05/11/26 09:16	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		05/10/26 10:50	05/11/26 09:16	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		05/10/26 10:50	05/11/26 09:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		05/10/26 10:50	05/11/26 09:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		05/10/26 10:50	05/11/26 09:16	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		05/10/26 10:50	05/11/26 09:16	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		05/10/26 10:50	05/11/26 09:16	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		05/10/26 10:50	05/11/26 09:16	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		05/10/26 10:50	05/11/26 09:16	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		05/10/26 10:50	05/11/26 09:16	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		05/10/26 10:50	05/11/26 09:16	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		05/10/26 10:50	05/11/26 09:16	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		05/10/26 10:50	05/11/26 09:16	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		05/10/26 10:50	05/11/26 09:16	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		05/10/26 10:50	05/11/26 09:16	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		05/10/26 10:50	05/11/26 09:16	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		05/10/26 10:50	05/11/26 09:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		05/10/26 10:50	05/11/26 09:16	1
<i>Surrogate</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>						
d5-NEtFOSAA	116		70 - 130			05/10/26 10:50	05/11/26 09:16	1
13C2 PFHxA	117		70 - 130			05/10/26 10:50	05/11/26 09:16	1
13C2 PFDA	117		70 - 130			05/10/26 10:50	05/11/26 09:16	1

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QC Sample Results

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

Job ID: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

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

Lab Sample ID: MBL 380-225988/21-A
Matrix: Water
Analysis Batch: 226117

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 225988

<i>Surrogate</i>	<i>MBL</i>	<i>MBL</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3-GenX	114	Qualifier	70 - 130	05/10/26 10:50	05/11/26 09:16	1

Lab Sample ID: LCS 380-225988/23-A
Matrix: Water
Analysis Batch: 226117

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 225988

<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 Dimer Acid (HFPO-DA/GenX)	25.0	23.1		ng/L		92		70 - 130
Perfluorooctanesulfonic acid (PFOS)	25.0	27.1		ng/L		108		70 - 130
Perfluoroundecanoic acid (PFUnA)	25.0	27.3		ng/L		109		70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.0	24.3		ng/L		97		70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.0	24.2		ng/L		97		70 - 130
Perfluorohexanoic acid (PFHxA)	25.0	24.4		ng/L		98		70 - 130
Perfluorododecanoic acid (PFDoA)	25.0	25.7		ng/L		103		70 - 130
Perfluorooctanoic acid (PFOA)	25.0	25.5		ng/L		102		70 - 130
Perfluorodecanoic acid (PFDA)	25.0	24.6		ng/L		98		70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.0	27.4		ng/L		110		70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.0	27.3		ng/L		109		70 - 130
Perfluoroheptanoic acid (PFHpA)	25.0	26.0		ng/L		104		70 - 130
Perfluorononanoic acid (PFNA)	25.0	27.3		ng/L		109		70 - 130
Perfluorotetradecanoic acid (PFTA)	25.0	24.8		ng/L		99		70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.0	26.4		ng/L		106		70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	25.0	26.4		ng/L		106		70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.0	24.8		ng/L		99		70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.0	23.3		ng/L		93		70 - 130

<i>Surrogate</i>	<i>LCS</i>	<i>LCS</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
d5-NEtFOSAA	98		70 - 130
13C2 PFHxA	99		70 - 130
13C2 PFDA	104		70 - 130
13C3-GenX	96		70 - 130

QC Sample Results

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

Job ID: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

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

Lab Sample ID: MRL 380-225988/22-A
Matrix: Water
Analysis Batch: 226117

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 225988

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.01	J	ng/L		100	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.20	J	ng/L		110	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.20	J	ng/L		110	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	1.91	J	ng/L		96	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	1.76	J	ng/L		88	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.07	J	ng/L		103	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.16	J	ng/L		108	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.11	J	ng/L		106	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.25	J	ng/L		113	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.28	J	ng/L		114	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.05	J	ng/L		103	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.14	J	ng/L		107	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.04	J	ng/L		102	50 - 150
Perfluorotridecanoic acid (PFTTrDA)	2.00	2.22	J	ng/L		111	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.10	J	ng/L		105	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.86	J	ng/L		93	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.10	J	ng/L		105	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	97		70 - 130
13C2 PFHxA	105		70 - 130
13C2 PFDA	110		70 - 130
13C3-GenX	99		70 - 130

Lab Sample ID: 380-212302-B-1-A MS
Matrix: Water
Analysis Batch: 226117

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 225988

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	27.2		ng/L		109	70 - 130
Perfluorooctanesulfonic acid (PFOS)	2.5		25.1	28.0		ng/L		102	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	28.2		ng/L		112	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	25.3		ng/L		101	70 - 130

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QC Sample Results

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

Job ID: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

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

Lab Sample ID: 380-212302-B-1-A MS
Matrix: Water
Analysis Batch: 226117

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 225988

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	24.7		ng/L		98	70 - 130	
Perfluorohexanoic acid (PFHxA)	3.3		25.1	29.2		ng/L		103	70 - 130	
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	26.6		ng/L		106	70 - 130	
Perfluorooctanoic acid (PFOA)	2.9		25.1	30.4		ng/L		110	70 - 130	
Perfluorodecanoic acid (PFDA)	<2.0		25.1	26.3		ng/L		105	70 - 130	
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	27.7		ng/L		104	70 - 130	
Perfluorobutanesulfonic acid (PFBS)	2.5		25.1	29.3		ng/L		107	70 - 130	
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	28.4		ng/L		106	70 - 130	
Perfluorononanoic acid (PFNA)	<2.0		25.1	27.0		ng/L		108	70 - 130	
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	24.9		ng/L		99	70 - 130	
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	26.9		ng/L		107	70 - 130	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	26.4		ng/L		106	70 - 130	
11-Chloroeicosasfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	24.5		ng/L		98	70 - 130	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	27.4		ng/L		109	70 - 130	
MS MS										
Surrogate	%Recovery	Qualifier	Limits							
d5-NEtFOSAA	105		70 - 130							
13C2 PFHxA	105		70 - 130							
13C2 PFDA	111		70 - 130							
13C3-GenX	112		70 - 130							

Lab Sample ID: 380-212302-C-1-A MSD
Matrix: Water
Analysis Batch: 226117

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 225988

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec		RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	25.5		ng/L		102	70 - 130	6	30	
Perfluorooctanesulfonic acid (PFOS)	2.5		25.1	28.6		ng/L		104	70 - 130	2	30	
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	26.9		ng/L		107	70 - 130	5	30	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	24.8		ng/L		99	70 - 130	2	30	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	24.2		ng/L		97	70 - 130	2	30	
Perfluorohexanoic acid (PFHxA)	3.3		25.1	29.8		ng/L		106	70 - 130	2	30	
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	27.1		ng/L		108	70 - 130	2	30	
Perfluorooctanoic acid (PFOA)	2.9		25.1	29.6		ng/L		106	70 - 130	3	30	
Perfluorodecanoic acid (PFDA)	<2.0		25.1	24.7		ng/L		98	70 - 130	7	30	

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QC Association Summary

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

Job ID: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

LCMS

Prep Batch: 225988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-212282-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	537.1 DW	
380-212282-2	FB: AIEA GULCH WELLS PUMP 2 (331-202-TPC	Total/NA	Water	537.1 DW	
MBL 380-225988/21-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-225988/23-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-225988/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-212302-B-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-212302-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 226117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-212282-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	EPA 537.1 V2	225988
380-212282-2	FB: AIEA GULCH WELLS PUMP 2 (331-202-TPC	Total/NA	Water	EPA 537.1 V2	225988
MBL 380-225988/21-A	Method Blank	Total/NA	Water	EPA 537.1 V2	225988
LCS 380-225988/23-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	225988
MRL 380-225988/22-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	225988
380-212302-B-1-A MS	Matrix Spike	Total/NA	Water	EPA 537.1 V2	225988
380-212302-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	EPA 537.1 V2	225988

Prep Batch: 227305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-212282-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	533	
MBL 380-227305/20-A	Method Blank	Total/NA	Water	533	
LCS 380-227305/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-227305/21-A	Lab Control Sample	Total/NA	Water	533	
380-212210-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-212210-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 227473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-212282-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	533	227305
MBL 380-227305/20-A	Method Blank	Total/NA	Water	533	227305
LCS 380-227305/22-A	Lab Control Sample	Total/NA	Water	533	227305
MRL 380-227305/21-A	Lab Control Sample	Total/NA	Water	533	227305
380-212210-B-1-A MS	Matrix Spike	Total/NA	Water	533	227305
380-212210-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	227305

Lab Chronicle

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

Job ID: 380-212282-1
 SDG: PFAS: Aiea Gulch Wells Pump 2

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

Lab Sample ID: 380-212282-1

Date Collected: 05/04/26 11:32

Matrix: Drinking Water

Date Received: 05/06/26 21:18

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			227305	XTD8	EA POM	05/15/26 06:23
Total/NA	Analysis	533		1	227473	Y5FM	EA POM	05/15/26 20:18
Total/NA	Prep	537.1 DW			225988	E9PK	EA POM	05/10/26 10:50
Total/NA	Analysis	EPA 537.1 V2		1	226117	SZ9R	EA POM	05/11/26 11:49

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

Lab Sample ID: 380-212282-2

Date Collected: 05/04/26 11:32

Matrix: Water

Date Received: 05/06/26 21:18

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			225988	E9PK	EA POM	05/10/26 10:50
Total/NA	Analysis	EPA 537.1 V2		1	226117	SZ9R	EA POM	05/11/26 11:58

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: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

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 *

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

Method Summary

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

Job ID: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

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: 380-212282-1
SDG: PFAS: Aiea Gulch Wells Pump 2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-212282-1	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Drinking Water	05/04/26 11:32	05/06/26 21:18	HI0000331
380-212282-2	FB: AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Water	05/04/26 11:32	05/06/26 21:18	HI0000331

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

Chain of Custody Record



COC No: 380-212282 COC

Client Information
 Client Contact: bailey
 Phone: +1 808 748 5840
 E-Mail: Maria.Lopez@et.eurofinsus.com
 Lab PM: Lopez, Maria
 State of Origin:
 Carrier Tracking No(s):
 Page: Page 1 of 1
 Job #:
 PWSID:
 Due Date Requested:
 TAT Requested (days):
 Compliance Project:
 PO #: C20525101 exp 05312023
 WO #:
 Project #: 38001111
 SSON#:
 Address: 630 South Beretama 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 Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Swast, Organ, Tissue, Air)	Preservation Code	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		SUBCONTRACT - 825 PAH Phys (EAL) + TICs		8015B_GRO_LL (MOD) GRO		8015B_PRO_LL_G8 - HNL Ranges C10-C24/C24-C38/C8-C18		825.2_PREC - (MOD) 825plus PLUS TICs		837.1_DW_PREC - 837.1 Full Lat		833 - All Analytes		Special Instructions/Note:	
						Field Filtered	MS/MSD	Subcontract	8015B	8015B	825.2	837.1	833	Total Number of Containers	Special Instructions/Note:								
Aiea Gulch Wells Pump 2 (331-202-TP072)	4-May-2026	1132	G	Water																		chlorinated	
FB: Aiea Gulch Wells Pump 2 (331-202-TP072)	4-May-2026	1132																					

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: _____ Date/Time: _____
 Company: HBWS

Requested by: _____ Date/Time: _____
 Received by: _____ Date/Time: _____
 Company: _____

Method of Shipment: _____
 Date/Time: _____
 Received by: _____ Date/Time: _____
 Company: _____

Cooler Temperature(s) °C and Other Remarks: (031A) 2: (10.0) 3: 1 901-550500
 Custody Seal No. _____
 Δ Yes Δ No



ORIGIN ID HIKA (808) 746-5840
BWS CHEMLAB
HONOLULU BOARD OF WATER SUPPLY
630 S. BERETANIA ST.
CHEMICAL LABORATORY
HONOLULU HI 96843
UNITED STATES US

SHIP DATE: 05MAY26
ACTWGT 58.00 LB
CAD-258050552/INET4535

BILL RECIPIENT

TO **EUROFINS RECEIVING DEPARTMENT**
EUROFINS DRINKING WATER TESTING
941 CORPORATE CENTER DR

POMONA CA 91768

(625) 386-1100 REF

58KJ220614948

DEPT



26102601203/uv

WED - 06 MAY 10:30A
PRIORITY OVERNIGHT

5 of 6

MPS# 8714 5001 1383

D263

Mstr# 8714 5001 1340

0201

91768

WM ONTA

CA-US ONT



(631A) 27400207 901-20267

~~Montana~~ Markham 5/6/26 945

After printing this label
CONSIGNEE COPY - PLEASE PLACE IN FRONT OF POUCH
1 Fold the printed page along the horizontal line
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Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-212282-1
SDG Number: PFAS: Aiea Gulch Wells Pump 2

Login Number: 212282

List Number: 1

Creator: Avila, Ivan

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	

