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ANALYTICAL REPORT

PREPARED FOR

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

Generated 1/28/2026 5:33:19 PM

JOB DESCRIPTION

RED-HILL
PFAS: Aiea Gulch Wells P1/P2

JOB NUMBER

380-192524-1

Eurofins Pomona
941 Corporate Center Drive
Pomona CA 91768-2642

See page two for job notes and contact information.

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

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Authorized for release by
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Table of Contents

Definitions/Glossary

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

Job ID: 380-192524-1
SDG: PFAS: Aiea Gulch Wells P1/P2

Qualifiers

LCMS

Qualifier	Qualifier Description
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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

Job Narrative
380-192524-1

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 1/14/2026 9:38 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.3°C.

PFAS
Method 533: The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method control limit: FB: AIEA GULCH WELLS PUMP 2 (331-202-TP072) (380-192524-4). IDA recoveries of 13C4 PFBA and 13C5 PFPeA bias low. Result not acceptable per method. Perfluorobutanoic acid (PFBA) detected greater than 1/3 MRL in field reagent blank FB: AIEA GULCH WELLS PUMP 2 (331-202-TP072) (380-192524-4) . Associated native sample did not have detection of these affected analytes. Insufficient volume for re-extraction. Analysis of PFAS 533 for FB: AIEA GULCH WELLS PUMP 2 (331-202-TP072) (380-192524-4) was excluded due to this QC failure. Analysis of the Field Blank is required only if a field sample contains a method analyte or analytes at, or above, the MRL. Sample results showed ND thus valid for reporting. (XWB4)

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

Detection Summary

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

Job ID: 380-192524-1
SDG: PFAS: Aiea Gulch Wells P1/P2

Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071) **Lab Sample ID: 380-192524-1**
PWSID Number: HI0000331

No Detections.

Client Sample ID: FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071) **Lab Sample ID: 380-192524-2**
PWSID Number: HI0000331

No Detections.

Client Sample ID: AIEA GULCH WELLS PUMP 2 (331-202-TP072) **Lab Sample ID: 380-192524-3**
PWSID Number: HI0000331

No Detections.

Client Sample ID: FB: AIEA GULCH WELLS PUMP 2 (331-202-TP072) **Lab Sample ID: 380-192524-4**
PWSID Number: HI0000331

No Detections.

This Detection Summary does not include radiochemical test results.

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

Lab Sample ID: 380-192524-1

Date Collected: 01/12/26 10:00
Date Received: 01/14/26 09:38

Matrix: Drinking Water
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		01/16/26 07:18	01/16/26 21:02	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:02	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*95*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:02*	*1*
13C6 PFDA	*102*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:02*	*1*
13C5 PFHxA	*103*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:02*	*1*
13C4 PFHpA	*101*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:02*	*1*
13C8 PFOA	*103*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:02*	*1*
13C9 PFNA	*101*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:02*	*1*
13C7 PFUnA	*101*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:02*	*1*
13C2 PFDoA	*99*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:02*	*1*
13C4 PFBA	*105*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:02*	*1*
13C5 PFPeA	*104*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:02*	*1*
13C3 PFBS	*108*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:02*	*1*
13C3 PFHxS	*108*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:02*	*1*

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

Lab Sample ID: 380-192524-1

Date Collected: 01/12/26 10:00
Date Received: 01/14/26 09:38

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	*105*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:02*	*1*
13C2-4:2-FTS	*119*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:02*	*1*
13C2-6:2-FTS	*109*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:02*	*1*
13C2-8:2-FTS	*103*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:02*	*1*

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		01/16/26 07:30	01/17/26 14:08	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		01/16/26 07:30	01/17/26 14:08	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		01/16/26 07:30	01/17/26 14:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		01/16/26 07:30	01/17/26 14:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		01/16/26 07:30	01/17/26 14:08	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		01/16/26 07:30	01/17/26 14:08	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		01/16/26 07:30	01/17/26 14:08	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		01/16/26 07:30	01/17/26 14:08	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		01/16/26 07:30	01/17/26 14:08	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		01/16/26 07:30	01/17/26 14:08	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		01/16/26 07:30	01/17/26 14:08	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		01/16/26 07:30	01/17/26 14:08	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		01/16/26 07:30	01/17/26 14:08	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		01/16/26 07:30	01/17/26 14:08	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		01/16/26 07:30	01/17/26 14:08	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		01/16/26 07:30	01/17/26 14:08	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		01/16/26 07:30	01/17/26 14:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		01/16/26 07:30	01/17/26 14:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*112*		*70 - 130*	*01/16/26 07:30*	*01/17/26 14:08*	*1*
13C2 PFHxA	*114*		*70 - 130*	*01/16/26 07:30*	*01/17/26 14:08*	*1*
13C2 PFDA	*123*		*70 - 130*	*01/16/26 07:30*	*01/17/26 14:08*	*1*
13C3-GenX	*115*		*70 - 130*	*01/16/26 07:30*	*01/17/26 14:08*	*1*

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

Lab Sample ID: 380-192524-2

Date Collected: 01/12/26 10:30
Date Received: 01/14/26 09:38

Matrix: Water
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		01/16/26 07:18	01/16/26 21:11	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		01/16/26 07:18	01/16/26 21:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		01/16/26 07:18	01/16/26 21:11	1

Client Sample ID: FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)
Lab Sample ID: 380-192524-2
Date Collected: 01/12/26 10:30
Matrix: Water
Date Received: 01/14/26 09:38
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		01/16/26 07:18	01/16/26 21:11	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		01/16/26 07:18	01/16/26 21:11	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*90*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:11*	*1*
13C6 PFDA	*105*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:11*	*1*
13C5 PFHxA	*109*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:11*	*1*
13C4 PFHpA	*109*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:11*	*1*
13C8 PFOA	*108*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:11*	*1*
13C9 PFNA	*107*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:11*	*1*
13C7 PFUnA	*105*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:11*	*1*
13C2 PFDoA	*102*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:11*	*1*
13C4 PFBA	*113*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:11*	*1*
13C5 PFPeA	*110*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:11*	*1*
13C3 PFBS	*117*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:11*	*1*
13C3 PFHxS	*113*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:11*	*1*
13C8 PFOS	*111*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:11*	*1*
13C2-4:2-FTS	*123*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:11*	*1*
13C2-6:2-FTS	*112*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:11*	*1*
13C2-8:2-FTS	*108*		*50 - 200*	*01/16/26 07:18*	*01/16/26 21:11*	*1*

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

Lab Sample ID: 380-192524-2

Date Collected: 01/12/26 10:30
Date Received: 01/14/26 09:38

Matrix: Water
PWSID Number: HI0000331

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:46	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:46	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:46	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:46	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:46	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:46	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:46	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:46	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:46	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:46	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:46	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:46	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:46	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:46	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:46	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:46	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*108*		*70 - 130*	*01/16/26 07:30*	*01/17/26 16:46*	*1*
13C2 PFHxA	*106*		*70 - 130*	*01/16/26 07:30*	*01/17/26 16:46*	*1*
13C2 PFDA	*122*		*70 - 130*	*01/16/26 07:30*	*01/17/26 16:46*	*1*
13C3-GenX	*99*		*70 - 130*	*01/16/26 07:30*	*01/17/26 16:46*	*1*

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

Lab Sample ID: 380-192524-3

Date Collected: 01/12/26 10:00
Date Received: 01/14/26 09:38

Matrix: Drinking Water
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		01/18/26 16:45	01/19/26 21:47	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1

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

Lab Sample ID: 380-192524-3

Date Collected: 01/12/26 10:00
Date Received: 01/14/26 09:38

Matrix: Drinking Water
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
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		01/18/26 16:45	01/19/26 21:47	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*100*		*50 - 200*	*01/18/26 16:45*	*01/19/26 21:47*	*1*
13C6 PFDA	*108*		*50 - 200*	*01/18/26 16:45*	*01/19/26 21:47*	*1*
13C5 PFHxA	*113*		*50 - 200*	*01/18/26 16:45*	*01/19/26 21:47*	*1*
13C4 PFHpA	*114*		*50 - 200*	*01/18/26 16:45*	*01/19/26 21:47*	*1*
13C8 PFOA	*109*		*50 - 200*	*01/18/26 16:45*	*01/19/26 21:47*	*1*
13C9 PFNA	*114*		*50 - 200*	*01/18/26 16:45*	*01/19/26 21:47*	*1*
13C7 PFUnA	*108*		*50 - 200*	*01/18/26 16:45*	*01/19/26 21:47*	*1*
13C2 PFDoA	*106*		*50 - 200*	*01/18/26 16:45*	*01/19/26 21:47*	*1*
13C4 PFBA	*110*		*50 - 200*	*01/18/26 16:45*	*01/19/26 21:47*	*1*
13C5 PFPeA	*112*		*50 - 200*	*01/18/26 16:45*	*01/19/26 21:47*	*1*
13C3 PFBS	*108*		*50 - 200*	*01/18/26 16:45*	*01/19/26 21:47*	*1*
13C3 PFHxS	*108*		*50 - 200*	*01/18/26 16:45*	*01/19/26 21:47*	*1*
13C8 PFOS	*112*		*50 - 200*	*01/18/26 16:45*	*01/19/26 21:47*	*1*
13C2-4:2-FTS	*120*		*50 - 200*	*01/18/26 16:45*	*01/19/26 21:47*	*1*
13C2-6:2-FTS	*116*		*50 - 200*	*01/18/26 16:45*	*01/19/26 21:47*	*1*
13C2-8:2-FTS	*102*		*50 - 200*	*01/18/26 16:45*	*01/19/26 21:47*	*1*

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:55	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:55	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:55	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:55	1

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

Lab Sample ID: 380-192524-3

Date Collected: 01/12/26 10:00
Date Received: 01/14/26 09:38

Matrix: Drinking Water
PWSID Number: HI0000331

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:55	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:55	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:55	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:55	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:55	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:55	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:55	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:55	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:55	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:55	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:55	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:55	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:55	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 16:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*117*		*70 - 130*	*01/16/26 07:30*	*01/17/26 16:55*	*1*
13C2 PFHxA	*115*		*70 - 130*	*01/16/26 07:30*	*01/17/26 16:55*	*1*
13C2 PFDA	*123*		*70 - 130*	*01/16/26 07:30*	*01/17/26 16:55*	*1*
13C3-GenX	*109*		*70 - 130*	*01/16/26 07:30*	*01/17/26 16:55*	*1*

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

Lab Sample ID: 380-192524-4

Date Collected: 01/12/26 10:30
Date Received: 01/14/26 09:38

Matrix: Water
PWSID Number: HI0000331

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 17:05	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 17:05	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 17:05	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 17:05	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 17:05	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 17:05	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 17:05	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 17:05	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 17:05	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 17:05	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 17:05	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 17:05	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 17:05	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 17:05	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 17:05	1

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

Job ID: 380-192524-1
SDG: PFAS: Aiea Gulch Wells P1/P2

Client Sample ID: FB: AIEA GULCH WELLS PUMP 2 (331-202-TP072)
Lab Sample ID: 380-192524-4

Date Collected: 01/12/26 10:30
Matrix: Water

Date Received: 01/14/26 09:38
PWSID Number: HI0000331

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 17:05	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 17:05	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		01/16/26 07:30	01/17/26 17:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*106*		*70 - 130*	*01/16/26 07:30*	*01/17/26 17:05*	*1*
13C2 PFHxA	*101*		*70 - 130*	*01/16/26 07:30*	*01/17/26 17:05*	*1*
13C2 PFDA	*115*		*70 - 130*	*01/16/26 07:30*	*01/17/26 17:05*	*1*
13C3-GenX	*98*		*70 - 130*	*01/16/26 07:30*	*01/17/26 17:05*	*1*

Action Limit Summary

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

Job ID: 380-192524-1
SDG: PFAS: Aiea Gulch Wells P1/P2

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

Lab Sample ID: 380-192524-1

PWSID Number: HI0000331

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
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	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

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

Lab Sample ID: 380-192524-2

PWSID Number: HI0000331

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
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	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

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

Lab Sample ID: 380-192524-3

PWSID Number: HI0000331

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA

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

Lab Sample ID: 380-192524-3

PWSID Number: HI0000331

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
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	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

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

Lab Sample ID: 380-192524-4

PWSID Number: HI0000331

Compliance Check

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

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

Surrogate Summary

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

Job ID: 380-192524-1
SDG: PFAS: Aiea Gulch Wells P1/P2

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Matrix: Drinking Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-192524-1	AIEA GULCH WELLS PUMP 1 (	112	114	123	115
380-192524-1 MS	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	120	117	124	120
380-192524-1 MSD	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	117	120	123	115
380-192524-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	117	115	123	109

Surrogate Legend

d5NEFOS = d5-NEtFOSAA
PFHxA = 13C2 PFHxA
PFDA = 13C2 PFDA
GenX = 13C3-GenX

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-192524-2	FB: AIEA GULCH WELLS PUMI	108	106	122	99
380-192524-4	FB: AIEA GULCH WELLS PUMI 2 (331-202-TP072)	106	101	115	98
LCS 380-198492/21-A	Lab Control Sample	112	108	120	103
MBL 380-198492/19-A	Method Blank	117	108	119	103
MRL 380-198492/20-A	Lab Control Sample	108	107	125	100

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: 380-192524-1
SDG: PFAS: Aiea Gulch Wells P1/P2

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

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDoA (50-200)
380-192524-1	AIEA GULCH WELLS PUMP 1 (	95	102	103	101	103	101	101	99
380-192524-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	100	108	113	114	109	114	108	106

		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)
380-192524-1	AIEA GULCH WELLS PUMP 1 (	105	104	108	108	105	119	109	103
380-192524-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	110	112	108	108	112	120	116	102

Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDoA (50-200)
380-192262-B-1-A MS	Matrix Spike	102	104	103	103	99	101	105	99
380-192262-C-1-A MSD	Matrix Spike Duplicate	106	103	109	109	106	103	106	105
380-192524-2	FB: AIEA GULCH WELLS PUMF 1 (331-201-TP071)	90	105	109	109	108	107	105	102
380-192782-B-1-A MS	Matrix Spike	107	100	93	98	101	109	98	103
380-192782-C-1-A MSD	Matrix Spike Duplicate	109	88	91	93	96	101	86	91
LCS 380-198486/22-A	Lab Control Sample	107	110	116	116	108	109	112	108
LCS 380-198755/21-A	Lab Control Sample	107	109	104	103	104	106	107	108
MBL 380-198486/20-A	Method Blank	84	96	101	100	100	99	97	91
MBL 380-198755/19-A	Method Blank	83	94	92	95	93	94	92	94
MRL 380-198486/21-A	Lab Control Sample	100	111	118	114	112	109	114	110
MRL 380-198755/20-A	Lab Control Sample	97	113	117	119	117	113	114	113

		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)
380-192262-B-1-A MS	Matrix Spike	102	107	100	103	101	106	104	96
380-192262-C-1-A MSD	Matrix Spike Duplicate	102	103	101	105	102	109	109	99

Isotope Dilution Summary

Client: City & County of Honolulu
Job ID: 380-192524-1
Project/Site: RED-HILL
SDG: PFAS: Aiea Gulch Wells P1/P2

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

Matrix: Water
Prep Type: Total/NA

		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)
380-192524-2	FB: AIEA GULCH WELLS PUMI	113	110	117	113	111	123	112	108
380-192782-B-1-A MS	Matrix Spike	122	228 *5+	91	105	111	141	153	138
380-192782-C-1-A MSD	Matrix Spike Duplicate	110	201 *5+	90	104	110	153	160	141
LCS 380-198486/22-A	Lab Control Sample	107	112	107	109	111	113	110	102
LCS 380-198755/21-A	Lab Control Sample	100	102	99	102	104	101	99	97
MBL 380-198486/20-A	Method Blank	100	95	101	100	98	109	100	96
MBL 380-198755/19-A	Method Blank	91	94	88	103	102	101	101	96
MRL 380-198486/21-A	Lab Control Sample	114	113	122	119	119	133	119	115
MRL 380-198755/20-A	Lab Control Sample	109	113	98	107	112	128	113	106

Surrogate Legend

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

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

Lab Sample ID: MBL 380-198486/20-A
Matrix: Water
Analysis Batch: 198638

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 198486

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0		ng/L		01/16/26 07:18	01/16/26 17:43	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*84*		*50 - 200*	*01/16/26 07:18*	*01/16/26 17:43*	*1*
13C6 PFDA	*96*		*50 - 200*	*01/16/26 07:18*	*01/16/26 17:43*	*1*
13C5 PFHxA	*101*		*50 - 200*	*01/16/26 07:18*	*01/16/26 17:43*	*1*
13C4 PFHpA	*100*		*50 - 200*	*01/16/26 07:18*	*01/16/26 17:43*	*1*
13C8 PFOA	*100*		*50 - 200*	*01/16/26 07:18*	*01/16/26 17:43*	*1*
13C9 PFNA	*99*		*50 - 200*	*01/16/26 07:18*	*01/16/26 17:43*	*1*
13C7 PFUnA	*97*		*50 - 200*	*01/16/26 07:18*	*01/16/26 17:43*	*1*
13C2 PFDoA	*91*		*50 - 200*	*01/16/26 07:18*	*01/16/26 17:43*	*1*
13C4 PFBA	*100*		*50 - 200*	*01/16/26 07:18*	*01/16/26 17:43*	*1*
13C5 PFPeA	*95*		*50 - 200*	*01/16/26 07:18*	*01/16/26 17:43*	*1*
13C3 PFBS	*101*		*50 - 200*	*01/16/26 07:18*	*01/16/26 17:43*	*1*
13C3 PFHxS	*100*		*50 - 200*	*01/16/26 07:18*	*01/16/26 17:43*	*1*

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

Lab Sample ID: MBL 380-198486/20-A
Matrix: Water
Analysis Batch: 198638

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 198486

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	98		50 - 200	01/16/26 07:18	01/16/26 17:43	1
13C2-4:2-FTS	109		50 - 200	01/16/26 07:18	01/16/26 17:43	1
13C2-6:2-FTS	100		50 - 200	01/16/26 07:18	01/16/26 17:43	1
13C2-8:2-FTS	96		50 - 200	01/16/26 07:18	01/16/26 17:43	1

Lab Sample ID: LCS 380-198486/22-A
Matrix: Water
Analysis Batch: 198638

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 198486

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	120	117		ng/L		97	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	109		ng/L		90	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	113		ng/L		94	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	118		ng/L		98	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	115		ng/L		96	70 - 130
Perfluorodecanoic acid (PFDA)	120	117		ng/L		97	70 - 130
Perfluorododecanoic acid (PFDoA)	120	117		ng/L		97	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	111		ng/L		92	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	117		ng/L		97	70 - 130
Perfluorohexanoic acid (PFHxA)	120	112		ng/L		93	70 - 130
Perfluorononanoic acid (PFNA)	120	115		ng/L		95	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	113		ng/L		94	70 - 130
Perfluorooctanoic acid (PFOA)	120	119		ng/L		99	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	118		ng/L		98	70 - 130
Perfluorobutanoic acid (PFBA)	120	117		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	113		ng/L		93	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	113		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	112		ng/L		93	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	114		ng/L		94	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	114		ng/L		95	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	122		ng/L		101	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	116		ng/L		96	70 - 130
Perfluoropentanoic acid (PFPeA)	120	113		ng/L		94	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	114		ng/L		95	70 - 130

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

Lab Sample ID: LCS 380-198486/22-A
Matrix: Water
Analysis Batch: 198638

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 198486

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluoropentanesulfonic acid (PFPeS)			120	117		ng/L		97	70 - 130		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*107*		*50 - 200*
13C6 PFDA	*110*		*50 - 200*
13C5 PFHxA	*116*		*50 - 200*
13C4 PFHpA	*116*		*50 - 200*
13C8 PFOA	*108*		*50 - 200*
13C9 PFNA	*109*		*50 - 200*
13C7 PFUnA	*112*		*50 - 200*
13C2 PFDoA	*108*		*50 - 200*
13C4 PFBA	*107*		*50 - 200*
13C5 PFPeA	*112*		*50 - 200*
13C3 PFBS	*107*		*50 - 200*
13C3 PFHxS	*109*		*50 - 200*
13C8 PFOS	*111*		*50 - 200*
13C2-4:2-FTS	*113*		*50 - 200*
13C2-6:2-FTS	*110*		*50 - 200*
13C2-8:2-FTS	*102*		*50 - 200*

Lab Sample ID: MRL 380-198486/21-A
Matrix: Water
Analysis Batch: 198638

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 198486

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			2.01	2.25	J	ng/L		112	50 - 150		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			2.01	2.05	J	ng/L		102	50 - 150		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			2.01	2.10	J	ng/L		105	50 - 150		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			2.01	2.06	J	ng/L		103	50 - 150		
Perfluorobutanesulfonic acid (PFBS)			2.01	2.07	J	ng/L		103	50 - 150		
Perfluorodecanoic acid (PFDA)			2.01	2.23	J	ng/L		111	50 - 150		
Perfluorododecanoic acid (PFDoA)			2.01	2.20	J	ng/L		109	50 - 150		
Perfluoroheptanoic acid (PFHpA)			2.01	2.10	J	ng/L		104	50 - 150		
Perfluorohexanesulfonic acid (PFHxS)			2.01	2.10	J	ng/L		105	50 - 150		
Perfluorohexanoic acid (PFHxA)			2.01	2.23	J	ng/L		111	50 - 150		
Perfluorononanoic acid (PFNA)			2.01	2.18	J	ng/L		109	50 - 150		
Perfluorooctanesulfonic acid (PFOS)			2.01	2.17	J	ng/L		108	50 - 150		
Perfluorooctanoic acid (PFOA)			2.01	2.18	J	ng/L		109	50 - 150		
Perfluoroundecanoic acid (PFUnA)			2.01	2.08	J	ng/L		104	50 - 150		
Perfluorobutanoic acid (PFBA)			2.01	2.24	J	ng/L		112	50 - 150		

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

Lab Sample ID: MRL 380-198486/21-A
Matrix: Water
Analysis Batch: 198638

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 198486

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.25	J	ng/L		112	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.40	J	ng/L		120	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.32	J	ng/L		115	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	2.18	J	ng/L		109	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.01	1.93	J	ng/L		96	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.28	J	ng/L		114	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	2.06	J	ng/L		102	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	2.22	J	ng/L		111	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	1.96	J	ng/L		98	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	2.03	J	ng/L		101	50 - 150

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C3 HFPO-DA	*100*		*50 - 200*
13C6 PFDA	*111*		*50 - 200*
13C5 PFHxA	*118*		*50 - 200*
13C4 PFHpA	*114*		*50 - 200*
13C8 PFOA	*112*		*50 - 200*
13C9 PFNA	*109*		*50 - 200*
13C7 PFUnA	*114*		*50 - 200*
13C2 PFDoA	*110*		*50 - 200*
13C4 PFBA	*114*		*50 - 200*
13C5 PFPeA	*113*		*50 - 200*
13C3 PFBS	*122*		*50 - 200*
13C3 PFHxS	*119*		*50 - 200*
13C8 PFOS	*119*		*50 - 200*
13C2-4:2-FTS	*133*		*50 - 200*
13C2-6:2-FTS	*119*		*50 - 200*
13C2-8:2-FTS	*115*		*50 - 200*

Lab Sample ID: 380-192262-B-1-A MS
Matrix: Water
Analysis Batch: 198638

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 198486

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		121	128		ng/L		106	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		121	115		ng/L		95	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	118		ng/L		97	70 - 130

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

Lab Sample ID: 380-192262-B-1-A MS
Matrix: Water
Analysis Batch: 198638

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 198486

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		121	118		ng/L		98	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		121	120		ng/L		98	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		121	116		ng/L		96	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		121	120		ng/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		121	120		ng/L		99	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		121	118		ng/L		97	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		121	127		ng/L		104	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		121	118		ng/L		98	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		121	119		ng/L		97	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		121	122		ng/L		100	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		121	117		ng/L		97	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		121	118		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	122		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	118		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	113		ng/L		94	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		121	132		ng/L		109	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		121	119		ng/L		99	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	125		ng/L		104	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	114		ng/L		94	70 - 130
Perfluoropentanoic acid (PFPeA)	2.0		121	118		ng/L		96	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	125		ng/L		103	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	122		ng/L		101	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C3 HFPO-DA	*102*		*50 - 200*
13C6 PFDA	*104*		*50 - 200*
13C5 PFHxA	*103*		*50 - 200*
13C4 PFHpA	*103*		*50 - 200*
13C8 PFOA	*99*		*50 - 200*
13C9 PFNA	*101*		*50 - 200*
13C7 PFUnA	*105*		*50 - 200*
13C2 PFDoA	*99*		*50 - 200*
13C4 PFBA	*102*		*50 - 200*
13C5 PFPeA	*107*		*50 - 200*
13C3 PFBS	*100*		*50 - 200*
13C3 PFHxS	*103*		*50 - 200*
13C8 PFOS	*101*		*50 - 200*

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

Lab Sample ID: 380-192262-B-1-A MS
Matrix: Water
Analysis Batch: 198638

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 198486

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	106		50 - 200
13C2-6:2-FTS	104		50 - 200
13C2-8:2-FTS	96		50 - 200

Lab Sample ID: 380-192262-C-1-A MSD
Matrix: Water
Analysis Batch: 198638

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 198486

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		121	123		ng/L		102	70 - 130	4	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		121	115		ng/L		95	70 - 130	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	117		ng/L		97	70 - 130	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		121	123		ng/L		102	70 - 130	4	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		121	123		ng/L		101	70 - 130	3	30
Perfluorodecanoic acid (PFDA)	<2.0		121	122		ng/L		101	70 - 130	5	30
Perfluorododecanoic acid (PFDoA)	<2.0		121	119		ng/L		99	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		121	120		ng/L		99	70 - 130	0	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		121	121		ng/L		100	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		121	124		ng/L		102	70 - 130	2	30
Perfluorononanoic acid (PFNA)	<2.0		121	120		ng/L		99	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		121	121		ng/L		99	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	<2.0		121	118		ng/L		97	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		121	121		ng/L		100	70 - 130	4	30
Perfluorobutanoic acid (PFBA)	<2.0		121	119		ng/L		98	70 - 130	1	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	121		ng/L		100	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	125		ng/L		104	70 - 130	6	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	121		ng/L		101	70 - 130	7	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		121	125		ng/L		104	70 - 130	5	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		121	121		ng/L		100	70 - 130	2	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	122		ng/L		101	70 - 130	3	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	119		ng/L		99	70 - 130	5	30
Perfluoropentanoic acid (PFPeA)	2.0		121	127		ng/L		103	70 - 130	7	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	123		ng/L		102	70 - 130	2	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	120		ng/L		99	70 - 130	2	30

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

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C3 HFPO-DA	106		50 - 200
13C6 PFDA	103		50 - 200
13C5 PFHxA	109		50 - 200
13C4 PFHpA	109		50 - 200
13C8 PFOA	106		50 - 200
13C9 PFNA	103		50 - 200
13C7 PFUnA	106		50 - 200
13C2 PFDoA	105		50 - 200
13C4 PFBA	102		50 - 200
13C5 PFPeA	103		50 - 200
13C3 PFBS	101		50 - 200
13C3 PFHxS	105		50 - 200
13C8 PFOS	102		50 - 200
13C2-4:2-FTS	109		50 - 200
13C2-6:2-FTS	109		50 - 200
13C2-8:2-FTS	99		50 - 200

Lab Sample ID: MBL 380-198755/19-A
Matrix: Water
Analysis Batch: 199018

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 198755

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1

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

Lab Sample ID: MBL 380-198755/19-A
Matrix: Water
Analysis Batch: 199018

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 198755

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	<0.38		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0		ng/L		01/18/26 16:45	01/19/26 18:36	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*83*		*50 - 200*	*01/18/26 16:45*	*01/19/26 18:36*	*1*
13C6 PFDA	*94*		*50 - 200*	*01/18/26 16:45*	*01/19/26 18:36*	*1*
13C5 PFHxA	*92*		*50 - 200*	*01/18/26 16:45*	*01/19/26 18:36*	*1*
13C4 PFHpA	*95*		*50 - 200*	*01/18/26 16:45*	*01/19/26 18:36*	*1*
13C8 PFOA	*93*		*50 - 200*	*01/18/26 16:45*	*01/19/26 18:36*	*1*
13C9 PFNA	*94*		*50 - 200*	*01/18/26 16:45*	*01/19/26 18:36*	*1*
13C7 PFUnA	*92*		*50 - 200*	*01/18/26 16:45*	*01/19/26 18:36*	*1*
13C2 PFDoA	*94*		*50 - 200*	*01/18/26 16:45*	*01/19/26 18:36*	*1*
13C4 PFBA	*91*		*50 - 200*	*01/18/26 16:45*	*01/19/26 18:36*	*1*
13C5 PFPeA	*94*		*50 - 200*	*01/18/26 16:45*	*01/19/26 18:36*	*1*
13C3 PFBS	*88*		*50 - 200*	*01/18/26 16:45*	*01/19/26 18:36*	*1*
13C3 PFHxS	*103*		*50 - 200*	*01/18/26 16:45*	*01/19/26 18:36*	*1*
13C8 PFOS	*102*		*50 - 200*	*01/18/26 16:45*	*01/19/26 18:36*	*1*
13C2-4:2-FTS	*101*		*50 - 200*	*01/18/26 16:45*	*01/19/26 18:36*	*1*
13C2-6:2-FTS	*101*		*50 - 200*	*01/18/26 16:45*	*01/19/26 18:36*	*1*
13C2-8:2-FTS	*96*		*50 - 200*	*01/18/26 16:45*	*01/19/26 18:36*	*1*

Lab Sample ID: LCS 380-198755/21-A
Matrix: Water
Analysis Batch: 199018

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 198755

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			121	103		ng/L		85	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			121	109		ng/L		90	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			121	104		ng/L		86	70 - 130		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			121	111		ng/L		92	70 - 130		
Perfluorobutanesulfonic acid (PFBS)			121	115		ng/L		96	70 - 130		
Perfluorodecanoic acid (PFDA)			121	114		ng/L		95	70 - 130		
Perfluorododecanoic acid (PFDoA)			121	114		ng/L		94	70 - 130		
Perfluoroheptanoic acid (PFHpA)			121	113		ng/L		94	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)			121	118		ng/L		98	70 - 130		
Perfluorohexanoic acid (PFHxA)			121	110		ng/L		91	70 - 130		
Perfluorononanoic acid (PFNA)			121	102		ng/L		85	70 - 130		
Perfluorooctanesulfonic acid (PFOS)			121	112		ng/L		93	70 - 130		
Perfluorooctanoic acid (PFOA)			121	110		ng/L		91	70 - 130		

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

Lab Sample ID: LCS 380-198755/21-A
Matrix: Water
Analysis Batch: 199018

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 198755

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	121	114		ng/L		95	70 - 130
Perfluorobutanoic acid (PFBA)	121	115		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	121	122		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	121	111		ng/L		92	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	121	123		ng/L		102	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	121	119		ng/L		99	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	121	123		ng/L		102	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	121	114		ng/L		94	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	121	113		ng/L		94	70 - 130
Perfluoropentanoic acid (PFPeA)	121	115		ng/L		95	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	121	114		ng/L		94	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	121	117		ng/L		97	70 - 130

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*107*		*50 - 200*
13C6 PFDA	*109*		*50 - 200*
13C5 PFHxA	*104*		*50 - 200*
13C4 PFHpA	*103*		*50 - 200*
13C8 PFOA	*104*		*50 - 200*
13C9 PFNA	*106*		*50 - 200*
13C7 PFUnA	*107*		*50 - 200*
13C2 PFDoA	*108*		*50 - 200*
13C4 PFBA	*100*		*50 - 200*
13C5 PFPeA	*102*		*50 - 200*
13C3 PFBS	*99*		*50 - 200*
13C3 PFHxS	*102*		*50 - 200*
13C8 PFOS	*104*		*50 - 200*
13C2-4:2-FTS	*101*		*50 - 200*
13C2-6:2-FTS	*99*		*50 - 200*
13C2-8:2-FTS	*97*		*50 - 200*

Lab Sample ID: MRL 380-198755/20-A
Matrix: Water
Analysis Batch: 199018

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 198755

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	1.97	J	ng/L		98	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	2.02	J	ng/L		101	50 - 150

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

Lab Sample ID: MRL 380-198755/20-A
Matrix: Water
Analysis Batch: 199018

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 198755

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	1.92	J	ng/L		96	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.26	J	ng/L		112	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.57	J	ng/L		128	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.20	J	ng/L		109	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.24	J	ng/L		111	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.20	J	ng/L		109	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.31	J	ng/L		115	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.02	J	ng/L		101	50 - 150
Perfluorononanoic acid (PFNA)	2.01	1.99	J	ng/L		99	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.09	J	ng/L		104	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.09	J	ng/L		104	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.16	J	ng/L		107	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	2.17	J	ng/L		108	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.39	J	ng/L		119	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.36	J	ng/L		117	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.29	J	ng/L		114	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	2.08	J	ng/L		103	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.01	2.62	J	ng/L		130	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.19	J	ng/L		109	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	2.16	J	ng/L		107	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	2.27	J	ng/L		113	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	1.98	J	ng/L		98	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	2.15	J	ng/L		107	50 - 150

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C3 HFPO-DA	*97*		*50 - 200*
13C6 PFDA	*113*		*50 - 200*
13C5 PFHxA	*117*		*50 - 200*
13C4 PFHpA	*119*		*50 - 200*
13C8 PFOA	*117*		*50 - 200*
13C9 PFNA	*113*		*50 - 200*
13C7 PFUnA	*114*		*50 - 200*
13C2 PFDoA	*113*		*50 - 200*
13C4 PFBA	*109*		*50 - 200*
13C5 PFPeA	*113*		*50 - 200*
13C3 PFBS	*98*		*50 - 200*
13C3 PFHxS	*107*		*50 - 200*

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

Lab Sample ID: MRL 380-198755/20-A
Matrix: Water
Analysis Batch: 199018

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 198755

Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits
13C8 PFOS	112		50 - 200
13C2-4:2-FTS	128		50 - 200
13C2-6:2-FTS	113		50 - 200
13C2-8:2-FTS	106		50 - 200

Lab Sample ID: 380-192782-B-1-A MS
Matrix: Water
Analysis Batch: 199018

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 198755

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		60.4	51.6		ng/L		85	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.4	55.4		ng/L		92	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	59.9		ng/L		99	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.4	60.2		ng/L		100	70 - 130
Perfluorobutanesulfonic acid (PFBS)	14		60.4	72.9		ng/L		98	70 - 130
Perfluorodecanoic acid (PFDA)	5.2		60.4	66.7		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.4	58.9		ng/L		98	70 - 130
Perfluoroheptanoic acid (PFHpA)	8.3		60.4	68.0		ng/L		99	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	10		60.4	72.1		ng/L		102	70 - 130
Perfluorohexanoic acid (PFHxA)	21		60.4	80.9		ng/L		99	70 - 130
Perfluorononanoic acid (PFNA)	3.7		60.4	57.4		ng/L		89	70 - 130
Perfluorooctanesulfonic acid (PFOS)	16		60.4	72.0		ng/L		92	70 - 130
Perfluorooctanoic acid (PFOA)	20		60.4	84.3		ng/L		106	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	60.0		ng/L		99	70 - 130
Perfluorobutanoic acid (PFBA)	13		60.4	68.8		ng/L		93	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	60.3		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	60.5		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	60.6		ng/L		99	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	54.7		ng/L		91	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		60.4	69.2		ng/L		115	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0	F1	60.4	89.1	F1	ng/L		148	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0	*5+	60.4	69.1	*5+	ng/L		115	70 - 130
Perfluoropentanoic acid (PFPeA)	15	*5+	60.4	72.4	*5+	ng/L		95	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	55.6		ng/L		92	70 - 130

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

Lab Sample ID: 380-192782-B-1-A MS
Matrix: Water
Analysis Batch: 199018

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 198755

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	2.2		60.4	60.0		ng/L		96	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C3 HFPO-DA	*107*		*50 - 200*
13C6 PFDA	*100*		*50 - 200*
13C5 PFHxA	*93*		*50 - 200*
13C4 PFHpA	*98*		*50 - 200*
13C8 PFOA	*101*		*50 - 200*
13C9 PFNA	*109*		*50 - 200*
13C7 PFUnA	*98*		*50 - 200*
13C2 PFDoA	*103*		*50 - 200*
13C4 PFBA	*122*		*50 - 200*
13C5 PFPeA	*228*	*5+	*50 - 200*
13C3 PFBS	*91*		*50 - 200*
13C3 PFHxS	*105*		*50 - 200*
13C8 PFOS	*111*		*50 - 200*
13C2-4:2-FTS	*141*		*50 - 200*
13C2-6:2-FTS	*153*		*50 - 200*
13C2-8:2-FTS	*138*		*50 - 200*

Lab Sample ID: 380-192782-C-1-A MSD
Matrix: Water
Analysis Batch: 199018

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 198755

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		60.5	52.4		ng/L		87	70 - 130	2	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.5	55.6		ng/L		92	70 - 130	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.5	59.5		ng/L		98	70 - 130	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.5	59.1		ng/L		98	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	14		60.5	73.3		ng/L		98	70 - 130	0	30
Perfluorodecanoic acid (PFDA)	5.2		60.5	65.5		ng/L		100	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.5	56.4		ng/L		93	70 - 130	4	30
Perfluoroheptanoic acid (PFHpA)	8.3		60.5	69.0		ng/L		100	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	10		60.5	72.0		ng/L		102	70 - 130	0	30
Perfluorohexanoic acid (PFHxA)	21		60.5	83.8		ng/L		104	70 - 130	4	30
Perfluorononanoic acid (PFNA)	3.7		60.5	61.2		ng/L		95	70 - 130	6	30
Perfluorooctanesulfonic acid (PFOS)	16		60.5	71.0		ng/L		90	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	20		60.5	84.6		ng/L		106	70 - 130	0	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.5	59.5		ng/L		97	70 - 130	1	30
Perfluorobutanoic acid (PFBA)	13		60.5	69.6		ng/L		94	70 - 130	1	30

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

Lab Sample ID: 380-192782-C-1-A MSD
Matrix: Water
Analysis Batch: 199018

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 198755

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.5	60.0		ng/L		99	70 - 130	0	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.5	57.9		ng/L		96	70 - 130	4	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.5	61.7		ng/L		101	70 - 130	2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.5	59.6		ng/L		99	70 - 130	9	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		60.5	73.3		ng/L		121	70 - 130	6	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0	F1	60.5	89.2	F1	ng/L		147	70 - 130	0	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0	*5+	60.5	68.8	*5+	ng/L		114	70 - 130	1	30
Perfluoropentanoic acid (PFPeA)	15	*5+	60.5	72.7	*5+	ng/L		95	70 - 130	0	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.5	55.6		ng/L		92	70 - 130	0	30
Perfluoropentanesulfonic acid (PFPeS)	2.2		60.5	59.4		ng/L		95	70 - 130	1	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C3 HFPO-DA	*109*		*50 - 200*
13C6 PFDA	*88*		*50 - 200*
13C5 PFHxA	*91*		*50 - 200*
13C4 PFHpA	*93*		*50 - 200*
13C8 PFOA	*96*		*50 - 200*
13C9 PFNA	*101*		*50 - 200*
13C7 PFUnA	*86*		*50 - 200*
13C2 PFDoA	*91*		*50 - 200*
13C4 PFBA	*110*		*50 - 200*
13C5 PFPeA	*201*	*5+	*50 - 200*
13C3 PFBS	*90*		*50 - 200*
13C3 PFHxS	*104*		*50 - 200*
13C8 PFOS	*110*		*50 - 200*
13C2-4:2-FTS	*153*		*50 - 200*
13C2-6:2-FTS	*160*		*50 - 200*
13C2-8:2-FTS	*141*		*50 - 200*

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Lab Sample ID: MBL 380-198492/19-A
Matrix: Water
Analysis Batch: 198709

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 198492

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		01/16/26 07:30	01/17/26 13:38	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		01/16/26 07:30	01/17/26 13:38	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		01/16/26 07:30	01/17/26 13:38	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0		ng/L		01/16/26 07:30	01/17/26 13:38	1

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: MBL 380-198492/19-A
Matrix: Water
Analysis Batch: 198709

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 198492

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0		ng/L		01/16/26 07:30	01/17/26 13:38	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		01/16/26 07:30	01/17/26 13:38	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		01/16/26 07:30	01/17/26 13:38	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		01/16/26 07:30	01/17/26 13:38	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		01/16/26 07:30	01/17/26 13:38	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		01/16/26 07:30	01/17/26 13:38	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		01/16/26 07:30	01/17/26 13:38	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		01/16/26 07:30	01/17/26 13:38	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		01/16/26 07:30	01/17/26 13:38	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0		ng/L		01/16/26 07:30	01/17/26 13:38	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0		ng/L		01/16/26 07:30	01/17/26 13:38	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		01/16/26 07:30	01/17/26 13:38	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		01/16/26 07:30	01/17/26 13:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		01/16/26 07:30	01/17/26 13:38	1

Surrogate	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*117*		*70 - 130*	*01/16/26 07:30*	*01/17/26 13:38*	*1*
13C2 PFHxA	*108*		*70 - 130*	*01/16/26 07:30*	*01/17/26 13:38*	*1*
13C2 PFDA	*119*		*70 - 130*	*01/16/26 07:30*	*01/17/26 13:38*	*1*
13C3-GenX	*103*		*70 - 130*	*01/16/26 07:30*	*01/17/26 13:38*	*1*

Lab Sample ID: LCS 380-198492/21-A
Matrix: Water
Analysis Batch: 198709

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 198492

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			25.1	23.0		ng/L		92	70 - 130		
Perfluorooctanesulfonic acid (PFOS)			25.1	27.5		ng/L		110	70 - 130		
Perfluoroundecanoic acid (PFUnA)			25.1	27.4		ng/L		109	70 - 130		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			25.1	25.4		ng/L		101	70 - 130		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			25.1	25.1		ng/L		100	70 - 130		
Perfluorohexanoic acid (PFHxA)			25.1	25.1		ng/L		100	70 - 130		
Perfluorododecanoic acid (PFDoA)			25.1	26.9		ng/L		107	70 - 130		
Perfluorooctanoic acid (PFOA)			25.1	26.8		ng/L		107	70 - 130		
Perfluorodecanoic acid (PFDA)			25.1	28.5		ng/L		114	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)			25.1	27.6		ng/L		110	70 - 130		
Perfluorobutanesulfonic acid (PFBS)			25.1	26.3		ng/L		105	70 - 130		
Perfluoroheptanoic acid (PFHpA)			25.1	25.9		ng/L		103	70 - 130		
Perfluorononanoic acid (PFNA)			25.1	27.3		ng/L		109	70 - 130		

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: LCS 380-198492/21-A
Matrix: Water
Analysis Batch: 198709

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 198492

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorotetradecanoic acid (PFTA)	25.1	25.5		ng/L		102	70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.1	28.4		ng/L		114	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.1	27.2		ng/L		109	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.1	26.8		ng/L		107	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.1	25.3		ng/L		101	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
d5-NEtFOSAA	*112*		*70 - 130*
13C2 PFHxA	*108*		*70 - 130*
13C2 PFDA	*120*		*70 - 130*
13C3-GenX	*103*		*70 - 130*

Lab Sample ID: MRL 380-198492/20-A
Matrix: Water
Analysis Batch: 198709

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 198492

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.01	J	ng/L		100	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.40	J	ng/L		120	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.44	J	ng/L		122	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.13	J	ng/L		106	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.16	J	ng/L		108	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.31	J	ng/L		115	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.33	J	ng/L		116	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.49	J	ng/L		124	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.29	J	ng/L		114	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.11	J	ng/L		105	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.28	J	ng/L		114	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.38	J	ng/L		119	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.31	J	ng/L		115	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.50	J	ng/L		125	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.35	J	ng/L		117	50 - 150

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: MRL 380-198492/20-A
Matrix: Water
Analysis Batch: 198709

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 198492

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.17	J	ng/L		108	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.08	J	ng/L		104	50 - 150

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
d5-NEtFOSAA	*108*		*70 - 130*
13C2 PFHxA	*107*		*70 - 130*
13C2 PFDA	*125*		*70 - 130*
13C3-GenX	*100*		*70 - 130*

Lab Sample ID: 380-192524-1 MS
Matrix: Drinking Water
Analysis Batch: 198709

Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)
Prep Type: Total/NA
Prep Batch: 198492

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		25.1	25.7		ng/L		103	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	27.6		ng/L		110	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	27.3		ng/L		109	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	27.8		ng/L		111	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	27.4		ng/L		109	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	27.0		ng/L		105	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	28.2		ng/L		112	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		25.1	27.2		ng/L		109	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		25.1	28.8		ng/L		115	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	27.9		ng/L		109	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	26.2		ng/L		104	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	27.1		ng/L		108	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		25.1	27.4		ng/L		109	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	25.5		ng/L		102	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	29.3		ng/L		117	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	27.8		ng/L		111	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	26.7		ng/L		107	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	27.5		ng/L		110	70 - 130

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: 380-192524-1 MS
Matrix: Drinking Water
Analysis Batch: 198709

Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)
Prep Type: Total/NA
Prep Batch: 198492

Surrogate	MS %Recovery	MS Qualifier	Limits
d5-NEtFOSAA	120		70 - 130
13C2 PFHxA	117		70 - 130
13C2 PFDA	124		70 - 130
13C3-GenX	120		70 - 130

Lab Sample ID: 380-192524-1 MSD
Matrix: Drinking Water
Analysis Batch: 198709

Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)
Prep Type: Total/NA
Prep Batch: 198492

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	26.3		ng/L		105	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	28.5		ng/L		113	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	27.4		ng/L		109	70 - 130	0	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	26.2		ng/L		104	70 - 130	6	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	26.2		ng/L		104	70 - 130	5	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	28.2		ng/L		110	70 - 130	4	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	27.3		ng/L		109	70 - 130	3	30
Perfluorooctanoic acid (PFOA)	<2.0		25.1	28.2		ng/L		112	70 - 130	3	30
Perfluorodecanoic acid (PFDA)	<2.0		25.1	27.6		ng/L		110	70 - 130	4	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	28.5		ng/L		111	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	29.6		ng/L		118	70 - 130	12	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	27.8		ng/L		111	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		25.1	29.2		ng/L		116	70 - 130	6	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	25.7		ng/L		102	70 - 130	1	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	29.9		ng/L		119	70 - 130	2	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	28.2		ng/L		112	70 - 130	2	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	22.7		ng/L		90	70 - 130	17	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	27.0		ng/L		108	70 - 130	2	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
d5-NEtFOSAA	117		70 - 130
13C2 PFHxA	120		70 - 130
13C2 PFDA	123		70 - 130
13C3-GenX	115		70 - 130

LCMS

Prep Batch: 198486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-192524-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	
380-192524-2	FB: AIEA GULCH WELLS PUMP 1 (331-201-TPC	Total/NA	Water	533	
MBL 380-198486/20-A	Method Blank	Total/NA	Water	533	
LCS 380-198486/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-198486/21-A	Lab Control Sample	Total/NA	Water	533	
380-192262-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-192262-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Prep Batch: 198492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-192524-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1 DW	
380-192524-2	FB: AIEA GULCH WELLS PUMP 1 (331-201-TPC	Total/NA	Water	537.1 DW	
380-192524-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	537.1 DW	
380-192524-4	FB: AIEA GULCH WELLS PUMP 2 (331-202-TPC	Total/NA	Water	537.1 DW	
MBL 380-198492/19-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-198492/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-198492/20-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-192524-1 MS	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1 DW	
380-192524-1 MSD	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 198638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-192524-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	533	198486
380-192524-2	FB: AIEA GULCH WELLS PUMP 1 (331-201-TPC	Total/NA	Water	533	198486
MBL 380-198486/20-A	Method Blank	Total/NA	Water	533	198486
LCS 380-198486/22-A	Lab Control Sample	Total/NA	Water	533	198486
MRL 380-198486/21-A	Lab Control Sample	Total/NA	Water	533	198486
380-192262-B-1-A MS	Matrix Spike	Total/NA	Water	533	198486
380-192262-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	198486

Analysis Batch: 198709

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-192524-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1	198492
380-192524-2	FB: AIEA GULCH WELLS PUMP 1 (331-201-TPC	Total/NA	Water	537.1	198492
380-192524-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	537.1	198492
380-192524-4	FB: AIEA GULCH WELLS PUMP 2 (331-202-TPC	Total/NA	Water	537.1	198492
MBL 380-198492/19-A	Method Blank	Total/NA	Water	537.1	198492
LCS 380-198492/21-A	Lab Control Sample	Total/NA	Water	537.1	198492
MRL 380-198492/20-A	Lab Control Sample	Total/NA	Water	537.1	198492
380-192524-1 MS	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1	198492
380-192524-1 MSD	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	537.1	198492

Prep Batch: 198755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-192524-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	533	
MBL 380-198755/19-A	Method Blank	Total/NA	Water	533	
LCS 380-198755/21-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-198755/20-A	Lab Control Sample	Total/NA	Water	533	
380-192782-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-192782-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

LCMS

Analysis Batch: 199018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-192524-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	533	198755
MBL 380-198755/19-A	Method Blank	Total/NA	Water	533	198755
LCS 380-198755/21-A	Lab Control Sample	Total/NA	Water	533	198755
MRL 380-198755/20-A	Lab Control Sample	Total/NA	Water	533	198755
380-192782-B-1-A MS	Matrix Spike	Total/NA	Water	533	198755
380-192782-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	198755

Lab Chronicle

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

Job ID: 380-192524-1
SDG: PFAS: Aiea Gulch Wells P1/P2

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

Lab Sample ID: 380-192524-1

Date Collected: 01/12/26 10:00
Date Received: 01/14/26 09:38

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			198486	XTD8	EA POM	01/16/26 07:18
Total/NA	Analysis	533		1	198638	Y5FM	EA POM	01/16/26 21:02
Total/NA	Prep	537.1 DW			198492	E9PK	EA POM	01/16/26 07:30
Total/NA	Analysis	537.1		1	198709	M7ML	EA POM	01/17/26 14:08

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

Lab Sample ID: 380-192524-2

Date Collected: 01/12/26 10:30
Date Received: 01/14/26 09:38

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			198486	XTD8	EA POM	01/16/26 07:18
Total/NA	Analysis	533		1	198638	Y5FM	EA POM	01/16/26 21:11
Total/NA	Prep	537.1 DW			198492	E9PK	EA POM	01/16/26 07:30
Total/NA	Analysis	537.1		1	198709	M7ML	EA POM	01/17/26 16:46

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

Lab Sample ID: 380-192524-3

Date Collected: 01/12/26 10:00
Date Received: 01/14/26 09:38

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			198755	N8NE	EA POM	01/18/26 16:45
Total/NA	Analysis	533		1	199018	SZ9R	EA POM	01/19/26 21:47
Total/NA	Prep	537.1 DW			198492	E9PK	EA POM	01/16/26 07:30
Total/NA	Analysis	537.1		1	198709	M7ML	EA POM	01/17/26 16:55

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

Lab Sample ID: 380-192524-4

Date Collected: 01/12/26 10:30
Date Received: 01/14/26 09:38

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			198492	E9PK	EA POM	01/16/26 07:30
Total/NA	Analysis	537.1		1	198709	M7ML	EA POM	01/17/26 17:05

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: 380-192524-1
SDG: PFAS: Aiea Gulch Wells P1/P2

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

Method Summary

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

Job ID: 380-192524-1
SDG: PFAS: Aiea Gulch Wells P1/P2

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA POM
537.1	Perfluorinated Alkyl Acids (LC/MS)	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: 380-192524-1
SDG: PFAS: Aiea Gulch Wells P1/P2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-192524-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Drinking Water	01/12/26 10:00	01/14/26 09:38	HI0000331
380-192524-2	FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Water	01/12/26 10:30	01/14/26 09:38	HI0000331
380-192524-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Drinking Water	01/12/26 10:00	01/14/26 09:38	HI0000331
380-192524-4	FB: AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Water	01/12/26 10:30	01/14/26 09:38	HI0000331

Eurofins Eaton Analytical Pomona
941 Corporate Center Drive
Pomona CA 91768-2642
Phone (626) 386-1100

Chain of Custody Record

eurofins Environment Testing

Client Information	Sampler: Kai Edison	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-28005-2757 1
Client Contact: Kirk Iwamoto	Phone: +1 808 748 5840	E-Mail: Rachelle.Arada@et.eurofinsus com	State of Origin:	Page: Page 1 of 1
Company: City & County of Honolulu	PWSID:			Job #:
Address: 630 South Beretania Street Chemistry Lab	Due Date Requested:			
City: Honolulu	TAT Requested (days):			
State, Zip: HI 96843	Compliance Project: Δ Yes Δ No			
Phone: 808-748-5840 (Tel)	PO #: C20525101 exp 05312023			
Email: kiwamoto@hbws org	WO #:			
Project Name: RED-HILL/HBWS Sites Event Desc: RUSH Weekly Red Hill	Project #: 38001111			
Site: Hawaii	SSOW#:			

Analysis Requested

Preservation Codes.
R - NaThioSO4
RA - NaThio/HCl
Q - Na2SO3
QA - Na2SO3/HCl
Y - Trizma
I - NH4 Acetate
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	625.1, 625.1_SIM	8015B_GRO_LL - (MOD) GRO	8015B_DRO_LL_CS - HNL Ranges C10-C24/C24-C36/C6-C18	525.2_PREC - (MOD) 525plus Plus TICs	537 1_DW_PREC - 537 1 Full List	533 - All Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	R	RA	Q	QA	Y	I	X	
Aiea Gulch Wells P1	12-Jan-2026	10:00	G	Water							3	3		chlorinated
Aiea Gulch Wells P2	12-Jan-2026	10:00	G	Water							3	3		chlorinated
FB Aiea Gulch Wells P1	12-Jan-2026	10 30	G	Water							1	1		
FB Aiea Gulch Wells P2	12-Jan-2026	10 30	G	Water							1	1		

380-192524 COC

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II III, IV Other (specify)

Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time	Method of Shipment: 8887326 8404
Relinquished by: [redacted]	Date/Time: 1/13/26 11:00	Company: HBWS	Received by: 4401 Date/Time: 1/14/26 9:38 Company: Eag
Relinquished by:	Date/Time:	Company	Received by: Date/Time: Company
Relinquished by:	Date/Time:	Company	Received by: Date/Time: Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks: 6.8-3.5=3.3 GF

Ver: 04/02/2024

Eurofins Eaton Analytical Pomona
941 Corporate Center Drive
Pomona CA 91768-2642
Phone (626) 386-1100

Chain of Custody Record

eurofins Environment Testing

Client Information	Sampler: Kai Edison	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-28005-2757 1
Client Contact: Kirk Iwamoto	Phone: +1 808 748 5840	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: City & County of Honolulu	PWSID:			Job #:
Address: 630 South Beretania Street Chemistry Lab	Due Date Requested:			
City: Honolulu	TAT Requested (days):			
State, Zip: HI 96843	Compliance Project: Δ Yes Δ No			
Phone: 808-748-5840 (Tel)	PO #: C20525101 exp 05312023			
Email: kiwamoto@hbws.org	WO #:			
Project Name: RED-HILL/HBWS Sites Event Desc: RUSH Weekly Red Hill	Project #: 38001111			
Site: Hawaii	SSOW#:			

Analysis Requested

Preservation Codes:
R - NaThioSO4
RA - NaThio/HCl
Q - Na2SO3
QA - Na2SO3/HCl
Y - Trizma
I - NH4 Acetate
Other

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	625.1, 625.1_SIN	8015B_GRO_LL - (MOD) GRO	8015B_DRO_LL_CS - HNL Ranges C10-C24/C24-C36/C6-C18	625.2_PREG - (MOD) 625plus Plus TICs	537 1_DW_PREG - 537 1 Full List	533 - All Analytes	Total Number of containers	Special Instructions/Note:
Preservation Code:						R	RA	Q	QA	Y	I		
Aiea Gulch Wells P1	12-Jan-2026	10:00	G	Water						3	3		chlorinated
Aiea Gulch Wells P2	12-Jan-2026	~~10:30~~ 10:00	G	Water						3	3		chlorinated
		KB 1/15/26											
FB Aiea Gulch Wells P1	12-Jan-2026	~~10:00~~ 10:30	G	Water						1	1		
FB Aiea Gulch Wells P2	12-Jan-2026	10:30	G	Water						1	1		

380-192524 COC

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested I, II, III, IV Other (specify)

Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: 8871732684404

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Kai Edison	1/13/26 11:00	HBWS	4401	1/14/26 9:38	
2		Date/Time:	Company	Received by	Date/Time:	Company
3		Date/Time:	Company	Received by	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 6.8-3.5=3.3 GB2

Ver: 04/02/2024

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-192524-1
SDG Number: PFAS: Aiea Gulch Wells P1/P2

Login Number: 192524
List Number: 1
Creator: Sanchez, Joseph G

List Source: Eurofins Pomona

Question	Answer	Comment
The coolers custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler(s) Temperature is acceptable.	True	
Cooler(s) Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and is legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
ClO4 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	