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ANALYTICAL REPORT

PREPARED FOR

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

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JOB DESCRIPTION

SPECIAL
PFAS - Waipahu Wells II GAC, Waipio Hts I P1

JOB NUMBER

380-178588-1

Eurofins Eaton Analytical Pomona
941 Corporate Center Drive
Pomona CA 91768-2642

See page two for job notes and contact information.

Eurofins Eaton Analytical Pomona

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Compliance Statement

1. Laboratory is accredited in accordance with TNI 2016 Standards and ISO/IEC 17025:2017.
2. Laboratory certifies that the test results meet all TNI 2016 and ISO/IEC 17025:2017 requirements unless noted under the individual analysis
3. Test results relate only to the sample(s) tested.
4. This report shall not be reproduced except in full, without the written approval of the laboratory.
5. Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below. (DW,Water matrices)

Authorization

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Authorized for release by
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Table of Contents

Definitions/Glossary

Client: City & County of Honolulu
Project/Site: SPECIAL

Job ID: 380-178588-1
SDG: PFAS - Waipahu Wells II GAC, Waipio Hts I P1

Qualifiers

LCMS

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job ID: 380-178588-1 — Eurofins Eaton Analytical Pomona

Job Narrative
380-178588-1

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 10/22/2025 10:08 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.5°C, 2.2°C and 3.3°C.

PFAS
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: SPECIAL

Job ID: 380-178588-1
SDG: PFAS - Waipahu Wells II GAC, Waipio Hts I P1

Client Sample ID: Waipahu Wells II GAC before treatment — Lab Sample ID: 380-178588-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
4-PFAS Hazard Index	0.00				NONE	1		None	Total/NA

Client Sample ID: Waipahu Wells II GAC after treatment — Lab Sample ID: 380-178588-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	2.1		2.0		ng/L	1		533	Total/NA
4-PFAS Hazard Index	0.00				NONE	1		None	Total/NA

Client Sample ID: Waipio Hts I P1 — Lab Sample ID: 380-178588-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	2.4		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.7		2.0		ng/L	1		537.1	Total/NA
4-PFAS Hazard Index	0.00				NONE	1		None	Total/NA

Client Sample ID: FB: Waipahu Wells II GAC before treatment — Lab Sample ID: 380-178588-4

No Detections.

Client Sample ID: FB: Waipahu Wells II GAC after treatment — Lab Sample ID: 380-178588-5

No Detections.

Client Sample ID: FB: Waipio Hts I P1 — Lab Sample ID: 380-178588-6

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: Waipahu Wells II GAC before treatment

Lab Sample ID: 380-178588-1

Date Collected: 10/17/25 11:10

Matrix: Drinking Water

Date Received: 10/22/25 10:08

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		10/28/25 07:20	10/28/25 23:15	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		10/28/25 07:20	10/28/25 23:15	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*98*		*50 - 200*	*10/28/25 07:20*	*10/28/25 23:15*	*1*
13C6 PFDA	*98*		*50 - 200*	*10/28/25 07:20*	*10/28/25 23:15*	*1*
13C5 PFHxA	*106*		*50 - 200*	*10/28/25 07:20*	*10/28/25 23:15*	*1*
13C4 PFHpA	*107*		*50 - 200*	*10/28/25 07:20*	*10/28/25 23:15*	*1*
13C8 PFOA	*99*		*50 - 200*	*10/28/25 07:20*	*10/28/25 23:15*	*1*
13C9 PFNA	*104*		*50 - 200*	*10/28/25 07:20*	*10/28/25 23:15*	*1*
13C7 PFUnA	*100*		*50 - 200*	*10/28/25 07:20*	*10/28/25 23:15*	*1*
13C2 PFDoA	*102*		*50 - 200*	*10/28/25 07:20*	*10/28/25 23:15*	*1*
13C4 PFBA	*105*		*50 - 200*	*10/28/25 07:20*	*10/28/25 23:15*	*1*
13C5 PFPeA	*104*		*50 - 200*	*10/28/25 07:20*	*10/28/25 23:15*	*1*
13C3 PFBS	*106*		*50 - 200*	*10/28/25 07:20*	*10/28/25 23:15*	*1*
13C3 PFHxS	*101*		*50 - 200*	*10/28/25 07:20*	*10/28/25 23:15*	*1*
13C8 PFOS	*110*		*50 - 200*	*10/28/25 07:20*	*10/28/25 23:15*	*1*

Client Sample ID: Waipahu Wells II GAC before treatment

Lab Sample ID: 380-178588-1
Date Collected: 10/17/25 11:10
Matrix: Drinking Water
Date Received: 10/22/25 10:08

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2-4:2-FTS	*113*		*50 - 200*	*10/28/25 07:20*	*10/28/25 23:15*	*1*
13C2-6:2-FTS	*101*		*50 - 200*	*10/28/25 07:20*	*10/28/25 23:15*	*1*
13C2-8:2-FTS	*99*		*50 - 200*	*10/28/25 07:20*	*10/28/25 23:15*	*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		10/29/25 02:19	10/30/25 16:17	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		10/29/25 02:19	10/30/25 16:17	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		10/29/25 02:19	10/30/25 16:17	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		10/29/25 02:19	10/30/25 16:17	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		10/29/25 02:19	10/30/25 16:17	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		10/29/25 02:19	10/30/25 16:17	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		10/29/25 02:19	10/30/25 16:17	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		10/29/25 02:19	10/30/25 16:17	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		10/29/25 02:19	10/30/25 16:17	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		10/29/25 02:19	10/30/25 16:17	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		10/29/25 02:19	10/30/25 16:17	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		10/29/25 02:19	10/30/25 16:17	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		10/29/25 02:19	10/30/25 16:17	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		10/29/25 02:19	10/30/25 16:17	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		10/29/25 02:19	10/30/25 16:17	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/29/25 02:19	10/30/25 16:17	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		10/29/25 02:19	10/30/25 16:17	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/29/25 02:19	10/30/25 16:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*106*		*70 - 130*	*10/29/25 02:19*	*10/30/25 16:17*	*1*
13C2 PFHxA	*108*		*70 - 130*	*10/29/25 02:19*	*10/30/25 16:17*	*1*
13C2 PFDA	*107*		*70 - 130*	*10/29/25 02:19*	*10/30/25 16:17*	*1*
13C3-GenX	*108*		*70 - 130*	*10/29/25 02:19*	*10/30/25 16:17*	*1*

Method: EPA None - PFAS Hazard Index

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4-PFAS Hazard Index	**0.00**			NONE			10/28/25 23:15	1

Client Sample ID: Waipahu Wells II GAC after treatment

Lab Sample ID: 380-178588-2
Date Collected: 10/17/25 11:26
Matrix: Drinking Water
Date Received: 10/22/25 10:08

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		10/28/25 07:20	10/29/25 01:45	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		10/28/25 07:20	10/29/25 01:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		10/28/25 07:20	10/29/25 01:45	1

Client: City & County of Honolulu
Project/Site: SPECIAL

Job ID: 380-178588-1
SDG: PFAS - Waipahu Wells II GAC, Waipio Hts I P1

Client Sample ID: Waipahu Wells II GAC after treatment
Date Collected: 10/17/25 11:26
Date Received: 10/22/25 10:08

Lab Sample ID: 380-178588-2
Matrix: Drinking Water

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)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
Perfluoropentanoic acid (PFPeA)	**2.1**		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:45	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*96*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:45*	*1*
13C6 PFDA	*101*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:45*	*1*
13C5 PFHxA	*102*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:45*	*1*
13C4 PFHpA	*102*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:45*	*1*
13C8 PFOA	*99*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:45*	*1*
13C9 PFNA	*101*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:45*	*1*
13C7 PFUnA	*99*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:45*	*1*
13C2 PFDoA	*102*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:45*	*1*
13C4 PFBA	*108*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:45*	*1*
13C5 PFPeA	*107*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:45*	*1*
13C3 PFBS	*104*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:45*	*1*
13C3 PFHxS	*99*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:45*	*1*
13C8 PFOS	*109*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:45*	*1*
13C2-4:2-FTS	*115*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:45*	*1*
13C2-6:2-FTS	*108*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:45*	*1*
13C2-8:2-FTS	*104*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:45*	*1*

Client Sample ID: Waipahu Wells II GAC after treatment

Lab Sample ID: 380-178588-2
Date Collected: 10/17/25 11:26
Matrix: Drinking Water
Date Received: 10/22/25 10:08

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		10/29/25 02:19	10/30/25 16:26	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:26	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:26	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:26	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:26	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:26	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:26	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:26	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:26	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:26	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:26	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:26	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:26	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:26	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:26	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:26	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*110*		*70 - 130*	*10/29/25 02:19*	*10/30/25 16:26*	*1*
13C2 PFHxA	*108*		*70 - 130*	*10/29/25 02:19*	*10/30/25 16:26*	*1*
13C2 PFDA	*106*		*70 - 130*	*10/29/25 02:19*	*10/30/25 16:26*	*1*
13C3-GenX	*104*		*70 - 130*	*10/29/25 02:19*	*10/30/25 16:26*	*1*

Method: EPA None - PFAS Hazard Index

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
4-PFAS Hazard Index	**0.00**				NONE			10/29/25 01:45	1

Client Sample ID: Waipio Hts I P1

Lab Sample ID: 380-178588-3
Date Collected: 10/17/25 10:04
Matrix: Drinking Water
Date Received: 10/22/25 10:08

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		10/28/25 07:20	10/29/25 01:56	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1

Client Sample ID: Waipio Hts I P1

Date Collected: 10/17/25 10:04
Date Received: 10/22/25 10:08

Lab Sample ID: 380-178588-3

Matrix: Drinking Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
Perfluorooctanesulfonic acid (PFOS)	**2.4**		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 01:56	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*93*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:56*	*1*
13C6 PFDA	*100*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:56*	*1*
13C5 PFHxA	*105*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:56*	*1*
13C4 PFHpA	*104*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:56*	*1*
13C8 PFOA	*101*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:56*	*1*
13C9 PFNA	*103*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:56*	*1*
13C7 PFUnA	*97*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:56*	*1*
13C2 PFDoA	*99*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:56*	*1*
13C4 PFBA	*105*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:56*	*1*
13C5 PFPeA	*104*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:56*	*1*
13C3 PFBS	*104*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:56*	*1*
13C3 PFHxS	*99*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:56*	*1*
13C8 PFOS	*108*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:56*	*1*
13C2-4:2-FTS	*116*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:56*	*1*
13C2-6:2-FTS	*108*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:56*	*1*
13C2-8:2-FTS	*104*		*50 - 200*	*10/28/25 07:20*	*10/29/25 01:56*	*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		10/29/25 02:19	10/30/25 16:36	1
Perfluorooctanesulfonic acid (PFOS)	**2.7**		2.0		ng/L		10/29/25 02:19	10/30/25 16:36	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:36	1

Client Sample ID: Waipio Hts I P1

Date Collected: 10/17/25 10:04
Date Received: 10/22/25 10:08

Lab Sample ID: 380-178588-3
Matrix: Drinking Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:36	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:36	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:36	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:36	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:36	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:36	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:36	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:36	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:36	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:36	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:36	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:36	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:36	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*109*		*70 - 130*	*10/29/25 02:19*	*10/30/25 16:36*	*1*
13C2 PFHxA	*107*		*70 - 130*	*10/29/25 02:19*	*10/30/25 16:36*	*1*
13C2 PFDA	*107*		*70 - 130*	*10/29/25 02:19*	*10/30/25 16:36*	*1*
13C3-GenX	*106*		*70 - 130*	*10/29/25 02:19*	*10/30/25 16:36*	*1*

Method: EPA None - PFAS Hazard Index

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
4-PFAS Hazard Index	**0.00**				NONE			10/29/25 01:56	1

Client Sample ID: FB: Waipahu Wells II GAC before treatment

Date Collected: 10/17/25 11:10
Date Received: 10/22/25 10:08

Lab Sample ID: 380-178588-4
Matrix: Drinking Water

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		10/28/25 07:20	10/29/25 02:07	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1

Client Sample ID: FB: Waipahu Wells II GAC before treatment

Lab Sample ID: 380-178588-4

Date Collected: 10/17/25 11:10

Matrix: Drinking Water

Date Received: 10/22/25 10:08

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:07	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*94*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:07*	*1*
13C6 PFDA	*94*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:07*	*1*
13C5 PFHxA	*102*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:07*	*1*
13C4 PFHpA	*103*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:07*	*1*
13C8 PFOA	*97*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:07*	*1*
13C9 PFNA	*101*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:07*	*1*
13C7 PFUnA	*89*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:07*	*1*
13C2 PFDoA	*89*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:07*	*1*
13C4 PFBA	*108*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:07*	*1*
13C5 PFPeA	*104*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:07*	*1*
13C3 PFBS	*103*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:07*	*1*
13C3 PFHxS	*101*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:07*	*1*
13C8 PFOS	*105*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:07*	*1*
13C2-4:2-FTS	*107*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:07*	*1*
13C2-6:2-FTS	*102*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:07*	*1*
13C2-8:2-FTS	*98*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:07*	*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		10/29/25 02:19	10/30/25 16:46	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:46	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:46	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:46	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:46	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:46	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:46	1

Client Sample ID: FB: Waipahu Wells II GAC before treatment

Lab Sample ID: 380-178588-4
Matrix: Drinking Water
Date Collected: 10/17/25 11:10
Date Received: 10/22/25 10:08

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:46	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:46	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:46	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:46	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:46	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:46	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:46	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:46	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:46	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*107*		*70 - 130*	*10/29/25 02:19*	*10/30/25 16:46*	*1*
13C2 PFHxA	*107*		*70 - 130*	*10/29/25 02:19*	*10/30/25 16:46*	*1*
13C2 PFDA	*111*		*70 - 130*	*10/29/25 02:19*	*10/30/25 16:46*	*1*
13C3-GenX	*104*		*70 - 130*	*10/29/25 02:19*	*10/30/25 16:46*	*1*

Client Sample ID: FB: Waipahu Wells II GAC after treatment

Lab Sample ID: 380-178588-5
Matrix: Drinking Water
Date Collected: 10/17/25 11:26
Date Received: 10/22/25 10:08

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		10/28/25 07:20	10/29/25 02:17	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1

Client Sample ID: FB: Waipahu Wells II GAC after treatment

Lab Sample ID: 380-178588-5

Date Collected: 10/17/25 11:26

Matrix: Drinking Water

Date Received: 10/22/25 10:08

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:17	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*84*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:17*	*1*
13C6 PFDA	*104*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:17*	*1*
13C5 PFHxA	*104*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:17*	*1*
13C4 PFHpA	*105*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:17*	*1*
13C8 PFOA	*102*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:17*	*1*
13C9 PFNA	*99*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:17*	*1*
13C7 PFUnA	*98*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:17*	*1*
13C2 PFDoA	*103*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:17*	*1*
13C4 PFBA	*105*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:17*	*1*
13C5 PFPeA	*100*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:17*	*1*
13C3 PFBS	*104*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:17*	*1*
13C3 PFHxS	*105*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:17*	*1*
13C8 PFOS	*108*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:17*	*1*
13C2-4:2-FTS	*112*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:17*	*1*
13C2-6:2-FTS	*104*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:17*	*1*
13C2-8:2-FTS	*106*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:17*	*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		10/29/25 02:19	10/30/25 16:55	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:55	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:55	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:55	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:55	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:55	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:55	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:55	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:55	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:55	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:55	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:55	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:55	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:55	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:55	1

Client Sample ID: FB: Waipahu Wells II GAC after treatment

Lab Sample ID: 380-178588-5
Matrix: Drinking Water
Date Collected: 10/17/25 11:26
Date Received: 10/22/25 10:08

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		10/29/25 02:19	10/30/25 16:55	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:55	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 16:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*106*		*70 - 130*	*10/29/25 02:19*	*10/30/25 16:55*	*1*
13C2 PFHxA	*113*		*70 - 130*	*10/29/25 02:19*	*10/30/25 16:55*	*1*
13C2 PFDA	*111*		*70 - 130*	*10/29/25 02:19*	*10/30/25 16:55*	*1*
13C3-GenX	*108*		*70 - 130*	*10/29/25 02:19*	*10/30/25 16:55*	*1*

Client Sample ID: FB: Waipio Hts I P1

Lab Sample ID: 380-178588-6
Matrix: Drinking Water
Date Collected: 10/17/25 10:44
Date Received: 10/22/25 10:08

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		10/28/25 07:20	10/29/25 02:28	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1

Client Sample ID: FB: Waipio Hts I P1

Date Collected: 10/17/25 10:44
Date Received: 10/22/25 10:08

Lab Sample ID: 380-178588-6

Matrix: Drinking Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		10/28/25 07:20	10/29/25 02:28	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*79*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:28*	*1*
13C6 PFDA	*98*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:28*	*1*
13C5 PFHxA	*101*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:28*	*1*
13C4 PFHpA	*104*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:28*	*1*
13C8 PFOA	*95*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:28*	*1*
13C9 PFNA	*96*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:28*	*1*
13C7 PFUnA	*95*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:28*	*1*
13C2 PFDoA	*99*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:28*	*1*
13C4 PFBA	*104*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:28*	*1*
13C5 PFPeA	*101*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:28*	*1*
13C3 PFBS	*101*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:28*	*1*
13C3 PFHxS	*96*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:28*	*1*
13C8 PFOS	*106*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:28*	*1*
13C2-4:2-FTS	*102*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:28*	*1*
13C2-6:2-FTS	*100*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:28*	*1*
13C2-8:2-FTS	*100*		*50 - 200*	*10/28/25 07:20*	*10/29/25 02:28*	*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		10/29/25 02:19	10/30/25 17:05	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 17:05	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 17:05	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 17:05	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 17:05	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 17:05	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 17:05	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 17:05	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 17:05	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 17:05	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 17:05	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 17:05	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 17:05	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 17:05	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 17:05	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 17:05	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 17:05	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		10/29/25 02:19	10/30/25 17:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*109*		*70 - 130*	*10/29/25 02:19*	*10/30/25 17:05*	*1*
13C2 PFHxA	*113*		*70 - 130*	*10/29/25 02:19*	*10/30/25 17:05*	*1*

Client: City & County of Honolulu
Project/Site: SPECIAL

Job ID: 380-178588-1
SDG: PFAS - Waipahu Wells II GAC, Waipio Hts I P1

Client Sample ID: FB: Waipio Hts I P1
Date Collected: 10/17/25 10:44
Date Received: 10/22/25 10:08

Lab Sample ID: 380-178588-6
Matrix: Drinking Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	116		70 - 130	10/29/25 02:19	10/30/25 17:05	1
13C3-GenX	112		70 - 130	10/29/25 02:19	10/30/25 17:05	1

Surrogate Summary

Client: City & County of Honolulu
Project/Site: SPECIAL

Job ID: 380-178588-1
SDG: PFAS - Waipahu Wells II GAC, Waipio Hts I P1

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

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

		Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS	PFHxA	PFDA	GenX
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
380-178588-1	Waipahu Wells II GAC before tre	106	108	107	108
380-178588-2	Waipahu Wells II GAC after treatment	110	108	106	104
380-178588-3	Waipio Hts I P1	109	107	107	106
380-178588-4	FB: Waipahu Wells II GAC before treatment	107	107	111	104
380-178588-5	FB: Waipahu Wells II GAC after treatment	106	113	111	108
380-178588-6	FB: Waipio Hts I P1	109	113	116	112
380-179050-B-1-A MS	Matrix Spike	108	113	107	110
380-179050-C-1-A MSD	Matrix Spike Duplicate	106	117	112	113
LCS 380-183084/22-A	Lab Control Sample	104	107	109	106
MBL 380-183084/20-A	Method Blank	96	104	103	102
MRL 380-183084/21-A	Lab Control Sample	104	106	110	104

Surrogate Legend

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

Isotope Dilution Summary

Client: City & County of Honolulu
Project/Site: SPECIAL

Job ID: 380-178588-1
SDG: PFAS - Waipahu Wells II GAC, Waipio Hts I P1

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)
380-178588-1	Waipahu Wells II GAC before tre	98	98	106	107	99	104	100	102
380-178588-1 MS	Waipahu Wells II GAC before treatment	100	100	106	111	100	103	97	98
380-178588-1 MSD	Waipahu Wells II GAC before treatment	108	108	108	110	104	105	100	105
380-178588-2	Waipahu Wells II GAC after treatment	96	101	102	102	99	101	99	102
380-178588-3	Waipio Hts I P1	93	100	105	104	101	103	97	99
380-178588-4	FB: Waipahu Wells II GAC before treatment	94	94	102	103	97	101	89	89
380-178588-5	FB: Waipahu Wells II GAC after treatment	84	104	104	105	102	99	98	103
380-178588-6	FB: Waipio Hts I P1	79	98	101	104	95	96	95	99
LCS 380-182727/22-A	Lab Control Sample	84	104	104	105	102	103	104	106
MBL 380-182727/20-A	Method Blank	80	106	110	108	106	110	100	106
MRL 380-182727/21-A	Lab Control Sample	83	101	102	108	103	103	97	99

		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)
380-178588-1	Waipahu Wells II GAC before tre	105	104	106	101	110	113	101	99
380-178588-1 MS	Waipahu Wells II GAC before treatment	108	111	101	101	107	105	96	97
380-178588-1 MSD	Waipahu Wells II GAC before treatment	110	107	105	99	107	102	97	95
380-178588-2	Waipahu Wells II GAC after treatment	108	107	104	99	109	115	108	104
380-178588-3	Waipio Hts I P1	105	104	104	99	108	116	108	104
380-178588-4	FB: Waipahu Wells II GAC before treatment	108	104	103	101	105	107	102	98
380-178588-5	FB: Waipahu Wells II GAC after treatment	105	100	104	105	108	112	104	106
380-178588-6	FB: Waipio Hts I P1	104	101	101	96	106	102	100	100
LCS 380-182727/22-A	Lab Control Sample	109	103	100	98	105	104	99	95
MBL 380-182727/20-A	Method Blank	112	112	110	104	116	115	100	102
MRL 380-182727/21-A	Lab Control Sample	108	104	105	103	107	113	104	96

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

Isotope Dilution Summary

Client: City & County of Honolulu
Project/Site: SPECIAL

Job ID: 380-178588-1
SDG: PFAS - Waipahu Wells II GAC, Waipio Hts I P1

82FTS = 13C2-8:2-FTS

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

Lab Sample ID: MBL 380-182727/20-A
Matrix: Drinking Water
Analysis Batch: 182984

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 182727

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		10/28/25 07:20	10/28/25 22:43	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.0		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0		ng/L		10/28/25 07:20	10/28/25 22:43	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*80*		*50 - 200*	*10/28/25 07:20*	*10/28/25 22:43*	*1*
13C6 PFDA	*106*		*50 - 200*	*10/28/25 07:20*	*10/28/25 22:43*	*1*
13C5 PFHxA	*110*		*50 - 200*	*10/28/25 07:20*	*10/28/25 22:43*	*1*
13C4 PFHpA	*108*		*50 - 200*	*10/28/25 07:20*	*10/28/25 22:43*	*1*
13C8 PFOA	*106*		*50 - 200*	*10/28/25 07:20*	*10/28/25 22:43*	*1*
13C9 PFNA	*110*		*50 - 200*	*10/28/25 07:20*	*10/28/25 22:43*	*1*
13C7 PFUnA	*100*		*50 - 200*	*10/28/25 07:20*	*10/28/25 22:43*	*1*
13C2 PFDoA	*106*		*50 - 200*	*10/28/25 07:20*	*10/28/25 22:43*	*1*
13C4 PFBA	*112*		*50 - 200*	*10/28/25 07:20*	*10/28/25 22:43*	*1*
13C5 PFPeA	*112*		*50 - 200*	*10/28/25 07:20*	*10/28/25 22:43*	*1*
13C3 PFBS	*110*		*50 - 200*	*10/28/25 07:20*	*10/28/25 22:43*	*1*
13C3 PFHxS	*104*		*50 - 200*	*10/28/25 07:20*	*10/28/25 22:43*	*1*

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

Lab Sample ID: MBL 380-182727/20-A
Matrix: Drinking Water
Analysis Batch: 182984

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 182727

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	116		50 - 200	10/28/25 07:20	10/28/25 22:43	1
13C2-4:2-FTS	115		50 - 200	10/28/25 07:20	10/28/25 22:43	1
13C2-6:2-FTS	100		50 - 200	10/28/25 07:20	10/28/25 22:43	1
13C2-8:2-FTS	102		50 - 200	10/28/25 07:20	10/28/25 22:43	1

Lab Sample ID: LCS 380-182727/22-A
Matrix: Drinking Water
Analysis Batch: 182984

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 182727

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.2	57.4		ng/L		95	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.2	58.6		ng/L		97	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.2	61.8		ng/L		103	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	60.2	59.2		ng/L		98	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.2	61.6		ng/L		102	70 - 130
Perfluorodecanoic acid (PFDA)	60.2	60.8		ng/L		101	70 - 130
Perfluorododecanoic acid (PFDoA)	60.2	59.8		ng/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.2	63.4		ng/L		105	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.2	66.0		ng/L		109	70 - 130
Perfluorohexanoic acid (PFHxA)	60.2	63.9		ng/L		106	70 - 130
Perfluorononanoic acid (PFNA)	60.2	63.4		ng/L		105	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.2	59.7		ng/L		99	70 - 130
Perfluorooctanoic acid (PFOA)	60.2	63.0		ng/L		104	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.2	61.6		ng/L		102	70 - 130
Perfluorobutanoic acid (PFBA)	60.2	61.5		ng/L		102	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.2	62.7		ng/L		104	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.2	66.4		ng/L		110	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.2	61.6		ng/L		102	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.2	65.1		ng/L		108	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.2	64.6		ng/L		107	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.2	59.7		ng/L		99	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.2	64.4		ng/L		107	70 - 130
Perfluoropentanoic acid (PFPeA)	60.2	64.0		ng/L		106	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.2	59.4		ng/L		99	70 - 130

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

Lab Sample ID: LCS 380-182727/22-A
Matrix: Drinking Water
Analysis Batch: 182984

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 182727

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluoropentanesulfonic acid (PFPeS)			60.2	61.9		ng/L		103	70 - 130		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*84*		*50 - 200*
13C6 PFDA	*104*		*50 - 200*
13C5 PFHxA	*104*		*50 - 200*
13C4 PFHpA	*105*		*50 - 200*
13C8 PFOA	*102*		*50 - 200*
13C9 PFNA	*103*		*50 - 200*
13C7 PFUnA	*104*		*50 - 200*
13C2 PFDoA	*106*		*50 - 200*
13C4 PFBA	*109*		*50 - 200*
13C5 PFPeA	*103*		*50 - 200*
13C3 PFBS	*100*		*50 - 200*
13C3 PFHxS	*98*		*50 - 200*
13C8 PFOS	*105*		*50 - 200*
13C2-4:2-FTS	*104*		*50 - 200*
13C2-6:2-FTS	*99*		*50 - 200*
13C2-8:2-FTS	*95*		*50 - 200*

Lab Sample ID: MRL 380-182727/21-A
Matrix: Drinking Water
Analysis Batch: 182984

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 182727

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			2.02	1.88	J	ng/L		93	50 - 150		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			2.02	1.88	J	ng/L		93	50 - 150		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			2.02	1.92	J	ng/L		95	50 - 150		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)			2.02	1.84	J	ng/L		91	50 - 150		
Perfluorobutanesulfonic acid (PFBS)			2.02	1.98	J	ng/L		98	50 - 150		
Perfluorodecanoic acid (PFDA)			2.02	2.09	J	ng/L		104	50 - 150		
Perfluorododecanoic acid (PFDoA)			2.02	2.10	J	ng/L		104	50 - 150		
Perfluoroheptanoic acid (PFHpA)			2.02	2.07	J	ng/L		103	50 - 150		
Perfluorohexanesulfonic acid (PFHxS)			2.02	1.99	J	ng/L		99	50 - 150		
Perfluorohexanoic acid (PFHxA)			2.02	2.04	J	ng/L		101	50 - 150		
Perfluorononanoic acid (PFNA)			2.02	2.04	J	ng/L		101	50 - 150		
Perfluorooctanesulfonic acid (PFOS)			2.02	2.10	J	ng/L		104	50 - 150		
Perfluorooctanoic acid (PFOA)			2.02	2.11	J	ng/L		105	50 - 150		
Perfluoroundecanoic acid (PFUnA)			2.02	2.09	J	ng/L		104	50 - 150		
Perfluorobutanoic acid (PFBA)			2.02	2.05	J	ng/L		102	50 - 150		

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

Lab Sample ID: MRL 380-182727/21-A
Matrix: Drinking Water
Analysis Batch: 182984

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 182727

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.02	2.21	J	ng/L		110	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.02	2.18	J	ng/L		108	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.02	2.46	J	ng/L		122	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.02	2.00	J	ng/L		99	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.02	1.94	J	ng/L		96	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.02	1.92	J	ng/L		95	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.02	2.06	J	ng/L		102	50 - 150
Perfluoropentanoic acid (PFPeA)	2.02	2.13	J	ng/L		106	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.02	1.91	J	ng/L		95	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.02	1.92	J	ng/L		95	50 - 150

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C3 HFPO-DA	*83*		*50 - 200*
13C6 PFDA	*101*		*50 - 200*
13C5 PFHxA	*102*		*50 - 200*
13C4 PFHpA	*108*		*50 - 200*
13C8 PFOA	*103*		*50 - 200*
13C9 PFNA	*103*		*50 - 200*
13C7 PFUnA	*97*		*50 - 200*
13C2 PFDoA	*99*		*50 - 200*
13C4 PFBA	*108*		*50 - 200*
13C5 PFPeA	*104*		*50 - 200*
13C3 PFBS	*105*		*50 - 200*
13C3 PFHxS	*103*		*50 - 200*
13C8 PFOS	*107*		*50 - 200*
13C2-4:2-FTS	*113*		*50 - 200*
13C2-6:2-FTS	*104*		*50 - 200*
13C2-8:2-FTS	*96*		*50 - 200*

Lab Sample ID: 380-178588-1 MS
Matrix: Drinking Water
Analysis Batch: 182984

Client Sample ID: Waipahu Wells II GAC before treatment
Prep Type: Total/NA
Prep Batch: 182727

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.2	57.1		ng/L		95	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.2	59.6		ng/L		99	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.2	57.0		ng/L		95	70 - 130

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

Lab Sample ID: 380-178588-1 MS
Matrix: Drinking Water
Analysis Batch: 182984

Client Sample ID: Waipahu Wells II GAC before treatment
Prep Type: Total/NA
Prep Batch: 182727

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		60.2	62.4		ng/L		104	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.2	66.0		ng/L		107	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		60.2	65.0		ng/L		108	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.2	63.7		ng/L		106	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		60.2	60.1		ng/L		99	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.2	65.4		ng/L		107	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		60.2	63.2		ng/L		103	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.2	63.0		ng/L		105	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.2	60.0		ng/L		97	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		60.2	66.0		ng/L		108	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.2	63.6		ng/L		106	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		60.2	63.3		ng/L		104	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.2	64.4		ng/L		107	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.2	64.7		ng/L		107	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.2	65.3		ng/L		108	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.2	64.4		ng/L		107	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		60.2	63.0		ng/L		105	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.2	62.0		ng/L		103	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.2	60.9		ng/L		101	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		60.2	62.3		ng/L		101	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.2	60.5		ng/L		100	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.2	64.5		ng/L		107	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C3 HFPO-DA	*100*		*50 - 200*
13C6 PFDA	*100*		*50 - 200*
13C5 PFHxA	*106*		*50 - 200*
13C4 PFHpA	*111*		*50 - 200*
13C8 PFOA	*100*		*50 - 200*
13C9 PFNA	*103*		*50 - 200*
13C7 PFUnA	*97*		*50 - 200*
13C2 PFDoA	*98*		*50 - 200*
13C4 PFBA	*108*		*50 - 200*
13C5 PFPeA	*111*		*50 - 200*
13C3 PFBS	*101*		*50 - 200*
13C3 PFHxS	*101*		*50 - 200*
13C8 PFOS	*107*		*50 - 200*

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

Lab Sample ID: 380-178588-1 MS
Matrix: Drinking Water
Analysis Batch: 182984

Client Sample ID: Waipahu Wells II GAC before treatment
Prep Type: Total/NA
Prep Batch: 182727

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	105		50 - 200
13C2-6:2-FTS	96		50 - 200
13C2-8:2-FTS	97		50 - 200

Lab Sample ID: 380-178588-1 MSD
Matrix: Drinking Water
Analysis Batch: 182984

Client Sample ID: Waipahu Wells II GAC before treatment
Prep Type: Total/NA
Prep Batch: 182727

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		60.4	58.8		ng/L		97	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.4	59.7		ng/L		99	70 - 130	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	62.8		ng/L		104	70 - 130	10	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		60.4	60.9		ng/L		101	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.4	63.0		ng/L		102	70 - 130	5	30
Perfluorodecanoic acid (PFDA)	<2.0		60.4	62.1		ng/L		103	70 - 130	5	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.4	62.6		ng/L		104	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	64.0		ng/L		105	70 - 130	6	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.4	66.5		ng/L		108	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		60.4	64.7		ng/L		105	70 - 130	2	30
Perfluorononanoic acid (PFNA)	<2.0		60.4	65.3		ng/L		108	70 - 130	4	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.4	63.9		ng/L		103	70 - 130	6	30
Perfluorooctanoic acid (PFOA)	<2.0		60.4	66.4		ng/L		109	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	64.7		ng/L		107	70 - 130	2	30
Perfluorobutanoic acid (PFBA)	<2.0		60.4	63.1		ng/L		103	70 - 130	0	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	65.7		ng/L		109	70 - 130	2	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	67.3		ng/L		112	70 - 130	4	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	68.3		ng/L		113	70 - 130	5	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	65.2		ng/L		108	70 - 130	1	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		60.4	61.3		ng/L		102	70 - 130	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	60.5		ng/L		100	70 - 130	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	62.3		ng/L		103	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)	<2.0		60.4	64.9		ng/L		105	70 - 130	4	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	62.4		ng/L		103	70 - 130	3	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	64.2		ng/L		106	70 - 130	0	30

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

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C3 HFPO-DA	108		50 - 200
13C6 PFDA	108		50 - 200
13C5 PFHxA	108		50 - 200
13C4 PFHpA	110		50 - 200
13C8 PFOA	104		50 - 200
13C9 PFNA	105		50 - 200
13C7 PFUnA	100		50 - 200
13C2 PFDoA	105		50 - 200
13C4 PFBA	110		50 - 200
13C5 PFPeA	107		50 - 200
13C3 PFBS	105		50 - 200
13C3 PFHxS	99		50 - 200
13C8 PFOS	107		50 - 200
13C2-4:2-FTS	102		50 - 200
13C2-6:2-FTS	97		50 - 200
13C2-8:2-FTS	95		50 - 200

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

Lab Sample ID: MBL 380-183084/20-A
Matrix: Drinking Water
Analysis Batch: 183425

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 183084

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		10/29/25 02:19	10/30/25 15:17	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		10/29/25 02:19	10/30/25 15:17	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		10/29/25 02:19	10/30/25 15:17	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0		ng/L		10/29/25 02:19	10/30/25 15:17	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0		ng/L		10/29/25 02:19	10/30/25 15:17	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		10/29/25 02:19	10/30/25 15:17	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		10/29/25 02:19	10/30/25 15:17	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		10/29/25 02:19	10/30/25 15:17	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		10/29/25 02:19	10/30/25 15:17	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		10/29/25 02:19	10/30/25 15:17	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		10/29/25 02:19	10/30/25 15:17	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		10/29/25 02:19	10/30/25 15:17	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		10/29/25 02:19	10/30/25 15:17	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0		ng/L		10/29/25 02:19	10/30/25 15:17	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0		ng/L		10/29/25 02:19	10/30/25 15:17	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		10/29/25 02:19	10/30/25 15:17	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		10/29/25 02:19	10/30/25 15:17	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		10/29/25 02:19	10/30/25 15:17	1

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	96		70 - 130	10/29/25 02:19	10/30/25 15:17	1
13C2 PFHxA	104		70 - 130	10/29/25 02:19	10/30/25 15:17	1
13C2 PFDA	103		70 - 130	10/29/25 02:19	10/30/25 15:17	1

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

Lab Sample ID: MBL 380-183084/20-A
Matrix: Drinking Water
Analysis Batch: 183425

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 183084

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-GenX	102		70 - 130	10/29/25 02:19	10/30/25 15:17	1

Lab Sample ID: LCS 380-183084/22-A
Matrix: Drinking Water
Analysis Batch: 183425

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 183084

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.1	24.3		ng/L		97	70 - 130
Perfluorooctanesulfonic acid (PFOS)	25.1	26.4		ng/L		105	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.1	24.8		ng/L		99	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.1	25.1		ng/L		100	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.1	24.3		ng/L		97	70 - 130
Perfluorohexanoic acid (PFHxA)	25.1	25.3		ng/L		101	70 - 130
Perfluorododecanoic acid (PFDoA)	25.1	25.9		ng/L		103	70 - 130
Perfluorooctanoic acid (PFOA)	25.1	25.6		ng/L		102	70 - 130
Perfluorodecanoic acid (PFDA)	25.1	25.4		ng/L		101	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.1	26.4		ng/L		105	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.1	26.2		ng/L		104	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.1	25.5		ng/L		102	70 - 130
Perfluorononanoic acid (PFNA)	25.1	27.1		ng/L		108	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.1	19.6		ng/L		78	70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.1	26.0		ng/L		104	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.1	26.8		ng/L		107	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.1	26.9		ng/L		107	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.1	25.9		ng/L		103	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	104		70 - 130
13C2 PFHxA	107		70 - 130
13C2 PFDA	109		70 - 130
13C3-GenX	106		70 - 130

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

Lab Sample ID: MRL 380-183084/21-A
Matrix: Drinking Water
Analysis Batch: 183425

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 183084

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.12	J	ng/L		106	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.33	J	ng/L		116	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.39	J	ng/L		119	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.01	2.08	J	ng/L		104	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.01	2.22	J	ng/L		110	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.24	J	ng/L		112	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.34	J	ng/L		117	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.26	J	ng/L		112	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.45	J	ng/L		122	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.33	J	ng/L		116	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.37	J	ng/L		118	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.42	J	ng/L		120	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.47	J	ng/L		123	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.01	1.97	J	ng/L		98	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.01	2.37	J	ng/L		118	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	2.45	J	ng/L		122	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.42	J	ng/L		121	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	2.25	J	ng/L		112	50 - 150

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
d5-NEtFOSAA	*104*		*70 - 130*
13C2 PFHxA	*106*		*70 - 130*
13C2 PFDA	*110*		*70 - 130*
13C3-GenX	*104*		*70 - 130*

Lab Sample ID: 380-179050-B-1-A MS
Matrix: Drinking Water
Analysis Batch: 183425

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 183084

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		25.2	24.8		ng/L		99	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.2	27.0		ng/L		107	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.2	26.6		ng/L		106	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.2	25.7		ng/L		102	70 - 130

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

Lab Sample ID: 380-179050-B-1-A MS
Matrix: Drinking Water
Analysis Batch: 183425

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 183084

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.2	25.0		ng/L		99	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		25.2	25.9		ng/L		103	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		25.2	27.8		ng/L		111	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		25.2	26.3		ng/L		105	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		25.2	25.6		ng/L		102	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.2	26.9		ng/L		107	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.2	26.4		ng/L		105	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		25.2	27.0		ng/L		106	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		25.2	26.6		ng/L		106	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		25.2	21.9		ng/L		87	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.2	26.6		ng/L		106	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.2	28.8		ng/L		114	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.2	28.7		ng/L		114	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.2	26.9		ng/L		107	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
d5-NEtFOSAA	*108*		*70 - 130*
13C2 PFHxA	*113*		*70 - 130*
13C2 PFDA	*107*		*70 - 130*
13C3-GenX	*110*		*70 - 130*

Lab Sample ID: 380-179050-C-1-A MSD
Matrix: Drinking Water
Analysis Batch: 183425

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 183084

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	26.7		ng/L		106	70 - 130	7	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	27.0		ng/L		107	70 - 130	0	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	26.6		ng/L		106	70 - 130	0	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	25.6		ng/L		102	70 - 130	0	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	25.1		ng/L		100	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	26.9		ng/L		107	70 - 130	4	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	27.3		ng/L		109	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	<2.0		25.1	27.0		ng/L		108	70 - 130	3	30
Perfluorodecanoic acid (PFDA)	<2.0		25.1	27.2		ng/L		108	70 - 130	6	30

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

Lab Sample ID: 380-179050-C-1-A MSD
Matrix: Drinking Water
Analysis Batch: 183425

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 183084

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	27.1		ng/L		108	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	26.9		ng/L		107	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	28.2		ng/L		111	70 - 130	5	30
Perfluorononanoic acid (PFNA)	<2.0		25.1	28.4		ng/L		113	70 - 130	7	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	22.9		ng/L		91	70 - 130	4	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	27.5		ng/L		110	70 - 130	4	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	27.7		ng/L		110	70 - 130	4	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	27.7		ng/L		110	70 - 130	4	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	27.4		ng/L		109	70 - 130	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
d5-NEtFOSAA	*106*		*70 - 130*
13C2 PFHxA	*117*		*70 - 130*
13C2 PFDA	*112*		*70 - 130*
13C3-GenX	*113*		*70 - 130*

LCMS

Prep Batch: 182727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-178588-1	Waipahu Wells II GAC before treatment	Total/NA	Drinking Water	533	
380-178588-2	Waipahu Wells II GAC after treatment	Total/NA	Drinking Water	533	
380-178588-3	Waipio Hts I P1	Total/NA	Drinking Water	533	
380-178588-4	FB: Waipahu Wells II GAC before treatment	Total/NA	Drinking Water	533	
380-178588-5	FB: Waipahu Wells II GAC after treatment	Total/NA	Drinking Water	533	
380-178588-6	FB: Waipio Hts I P1	Total/NA	Drinking Water	533	
MBL 380-182727/20-A	Method Blank	Total/NA	Drinking Water	533	
LCS 380-182727/22-A	Lab Control Sample	Total/NA	Drinking Water	533	
MRL 380-182727/21-A	Lab Control Sample	Total/NA	Drinking Water	533	
380-178588-1 MS	Waipahu Wells II GAC before treatment	Total/NA	Drinking Water	533	
380-178588-1 MSD	Waipahu Wells II GAC before treatment	Total/NA	Drinking Water	533	

Analysis Batch: 182984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-178588-1	Waipahu Wells II GAC before treatment	Total/NA	Drinking Water	533	182727
380-178588-2	Waipahu Wells II GAC after treatment	Total/NA	Drinking Water	533	182727
380-178588-3	Waipio Hts I P1	Total/NA	Drinking Water	533	182727
380-178588-4	FB: Waipahu Wells II GAC before treatment	Total/NA	Drinking Water	533	182727
380-178588-5	FB: Waipahu Wells II GAC after treatment	Total/NA	Drinking Water	533	182727
380-178588-6	FB: Waipio Hts I P1	Total/NA	Drinking Water	533	182727
MBL 380-182727/20-A	Method Blank	Total/NA	Drinking Water	533	182727
LCS 380-182727/22-A	Lab Control Sample	Total/NA	Drinking Water	533	182727
MRL 380-182727/21-A	Lab Control Sample	Total/NA	Drinking Water	533	182727
380-178588-1 MS	Waipahu Wells II GAC before treatment	Total/NA	Drinking Water	533	182727
380-178588-1 MSD	Waipahu Wells II GAC before treatment	Total/NA	Drinking Water	533	182727

Prep Batch: 183084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-178588-1	Waipahu Wells II GAC before treatment	Total/NA	Drinking Water	537.1 DW	
380-178588-2	Waipahu Wells II GAC after treatment	Total/NA	Drinking Water	537.1 DW	
380-178588-3	Waipio Hts I P1	Total/NA	Drinking Water	537.1 DW	
380-178588-4	FB: Waipahu Wells II GAC before treatment	Total/NA	Drinking Water	537.1 DW	
380-178588-5	FB: Waipahu Wells II GAC after treatment	Total/NA	Drinking Water	537.1 DW	
380-178588-6	FB: Waipio Hts I P1	Total/NA	Drinking Water	537.1 DW	
MBL 380-183084/20-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LCS 380-183084/22-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	
MRL 380-183084/21-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	
380-179050-B-1-A MS	Matrix Spike	Total/NA	Drinking Water	537.1 DW	
380-179050-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 183256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-178588-1	Waipahu Wells II GAC before treatment	Total/NA	Drinking Water	None	
380-178588-2	Waipahu Wells II GAC after treatment	Total/NA	Drinking Water	None	
380-178588-3	Waipio Hts I P1	Total/NA	Drinking Water	None	

Analysis Batch: 183425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-178588-1	Waipahu Wells II GAC before treatment	Total/NA	Drinking Water	537.1	183084
380-178588-2	Waipahu Wells II GAC after treatment	Total/NA	Drinking Water	537.1	183084
380-178588-3	Waipio Hts I P1	Total/NA	Drinking Water	537.1	183084

LCMS (Continued)

Analysis Batch: 183425 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-178588-4	FB: Waipahu Wells II GAC before treatment	Total/NA	Drinking Water	537.1	183084
380-178588-5	FB: Waipahu Wells II GAC after treatment	Total/NA	Drinking Water	537.1	183084
380-178588-6	FB: Waipio Hts I P1	Total/NA	Drinking Water	537.1	183084
MBL 380-183084/20-A	Method Blank	Total/NA	Drinking Water	537.1	183084
LCS 380-183084/22-A	Lab Control Sample	Total/NA	Drinking Water	537.1	183084
MRL 380-183084/21-A	Lab Control Sample	Total/NA	Drinking Water	537.1	183084
380-179050-B-1-A MS	Matrix Spike	Total/NA	Drinking Water	537.1	183084
380-179050-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Drinking Water	537.1	183084

Lab Chronicle

Client: City & County of Honolulu
Project/Site: SPECIAL

Job ID: 380-178588-1
SDG: PFAS - Waipahu Wells II GAC, Waipio Hts I P1

Client Sample ID: Waipahu Wells II GAC before treatment

Lab Sample ID: 380-178588-1
Matrix: Drinking Water
Date Collected: 10/17/25 11:10
Date Received: 10/22/25 10:08

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			182727	XTD8	EA POM	10/28/25 07:20
Total/NA	Analysis	533		1	182984	M7ML	EA POM	10/28/25 23:15
Total/NA	Prep	537.1 DW			183084	G9MN	EA POM	10/29/25 02:19
Total/NA	Analysis	537.1		1	183425	Y5FM	EA POM	10/30/25 16:17
Total/NA	Analysis	None		1	183256	Y7BM	EA POM	10/28/25 23:15

Client Sample ID: Waipahu Wells II GAC after treatment

Lab Sample ID: 380-178588-2
Matrix: Drinking Water
Date Collected: 10/17/25 11:26
Date Received: 10/22/25 10:08

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			182727	XTD8	EA POM	10/28/25 07:20
Total/NA	Analysis	533		1	182984	M7ML	EA POM	10/29/25 01:45
Total/NA	Prep	537.1 DW			183084	G9MN	EA POM	10/29/25 02:19
Total/NA	Analysis	537.1		1	183425	Y5FM	EA POM	10/30/25 16:26
Total/NA	Analysis	None		1	183256	Y7BM	EA POM	10/29/25 01:45

Client Sample ID: Waipio Hts I P1

Lab Sample ID: 380-178588-3
Matrix: Drinking Water
Date Collected: 10/17/25 10:04
Date Received: 10/22/25 10:08

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			182727	XTD8	EA POM	10/28/25 07:20
Total/NA	Analysis	533		1	182984	M7ML	EA POM	10/29/25 01:56
Total/NA	Prep	537.1 DW			183084	G9MN	EA POM	10/29/25 02:19
Total/NA	Analysis	537.1		1	183425	Y5FM	EA POM	10/30/25 16:36
Total/NA	Analysis	None		1	183256	Y7BM	EA POM	10/29/25 01:56

Client Sample ID: FB: Waipahu Wells II GAC before treatment

Lab Sample ID: 380-178588-4
Matrix: Drinking Water
Date Collected: 10/17/25 11:10
Date Received: 10/22/25 10:08

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			182727	XTD8	EA POM	10/28/25 07:20
Total/NA	Analysis	533		1	182984	M7ML	EA POM	10/29/25 02:07
Total/NA	Prep	537.1 DW			183084	G9MN	EA POM	10/29/25 02:19
Total/NA	Analysis	537.1		1	183425	Y5FM	EA POM	10/30/25 16:46

Client Sample ID: FB: Waipahu Wells II GAC after treatment

Lab Sample ID: 380-178588-5
Matrix: Drinking Water
Date Collected: 10/17/25 11:26
Date Received: 10/22/25 10:08

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			182727	XTD8	EA POM	10/28/25 07:20
Total/NA	Analysis	533		1	182984	M7ML	EA POM	10/29/25 02:17

Lab Chronicle

Client: City & County of Honolulu
Project/Site: SPECIAL

Job ID: 380-178588-1
SDG: PFAS - Waipahu Wells II GAC, Waipio Hts I P1

Client Sample ID: FB: Waipahu Wells II GAC after treatment

Lab Sample ID: 380-178588-5

Date Collected: 10/17/25 11:26
Matrix: Drinking Water
Date Received: 10/22/25 10:08

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			183084	G9MN	EA POM	10/29/25 02:19
Total/NA	Analysis	537.1		1	183425	Y5FM	EA POM	10/30/25 16:55

Client Sample ID: FB: Waipio Hts I P1

Lab Sample ID: 380-178588-6

Date Collected: 10/17/25 10:44
Matrix: Drinking Water
Date Received: 10/22/25 10:08

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			182727	XTD8	EA POM	10/28/25 07:20
Total/NA	Analysis	533		1	182984	M7ML	EA POM	10/29/25 02:28
Total/NA	Prep	537.1 DW			183084	G9MN	EA POM	10/29/25 02:19
Total/NA	Analysis	537.1		1	183425	Y5FM	EA POM	10/30/25 17:05

Laboratory References:

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

Accreditation/Certification Summary

Client: City & County of Honolulu
Job ID: 380-178588-1
Project/Site: SPECIAL
SDG: PFAS - Waipahu Wells II GAC, Waipio Hts I P1

Laboratory: Eurofins Eaton Analytical Pomona

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

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

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
None		Drinking Water	4-PFAS Hazard Index

Method Summary

Client: City & County of Honolulu
Project/Site: SPECIAL

Job ID: 380-178588-1
SDG: PFAS - Waipahu Wells II GAC, Waipio Hts I P1

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
None	PFAS Hazard Index	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 Eaton Analytical Pomona, 941 Corporate Center Drive, Pomona, CA 91768-2642, TEL (626)386-1100

Sample Summary

Client: City & County of Honolulu
Project/Site: SPECIAL

Job ID: 380-178588-1
SDG: PFAS - Waipahu Wells II GAC, Waipio Hts I P1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-178588-1	Waipahu Wells II GAC before treatment	Drinking Water	10/17/25 11:10	10/22/25 10:08	Hawaii
380-178588-2	Waipahu Wells II GAC after treatment	Drinking Water	10/17/25 11:26	10/22/25 10:08	Hawaii
380-178588-3	Waipio Hts I P1	Drinking Water	10/17/25 10:04	10/22/25 10:08	Hawaii
380-178588-4	FB: Waipahu Wells II GAC before treatment	Drinking Water	10/17/25 11:10	10/22/25 10:08	Hawaii
380-178588-5	FB: Waipahu Wells II GAC after treatment	Drinking Water	10/17/25 11:26	10/22/25 10:08	Hawaii
380-178588-6	FB: Waipio Hts I P1	Drinking Water	10/17/25 10:44	10/22/25 10:08	Hawaii

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: Bailey	Lab PM: Arada Rachelle	Carrier Tracking No(s):	COC No:
Client Contact: Mr Erwin Kawata	Phone: +1 8087485840	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 Public Service Bldg Room 310	Due Date Requested:			
City: Honolulu	TAT Requested (days):			
State Zip: HI 96843	Compliance Project: Δ Yes Δ No			
Phone: 808-748-5091(Tel)	PO #: C20525101 exp 05312023			
Email: ekawata@hbws org	WO #:			
Project Name: SPECIAL	Project #: 38000519			
Site: Hawaii	SSOW#:			

Analysis Requested

Preservation Codes
Y Trizma
N - None
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)	537 1_DW_PREC 537 1 Full List Y	PFAS_HazIndex Local Method N	533 All Analytes I	Total Number of containers	Special Instructions/Note
			Preservation Code:								
Waipahu Wells II GAC before treatment	17-Oct-2025	1110	G	Drinking Wate			3	X	3		Pump(s) running 2,4
Waipahu Wells II GAC after treatment	17-Oct-2025	1126	G	Drinking Wate			3	X	3		
Waipio Hts I P1	17-Oct-2025	1044	G	Drinking Wate			3	X	3		
FB Waipahu Wells II GAC before treatment	17-Oct-2025	1110					1	X	1		
FB Waipahu Wells II GAC after treatment	17-Oct-2025	1126					1	X	1		
FB Waipio Hts I P1	17-Oct-2025	1044					1	X	1		

480-178588 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: 8853 6716 3772/3794/3809
[redacted]	Date/Time: 21 October 2025 1400	Company: HBWS	Received by: Yuki Date/Time: 10/22/25 1008 Company: EEAP
	Date/Time:	Company	Received by: Date/Time: Company
Relinquished by:	Date/Time:	Company	Received by: Date/Time: 3.3 3.3 Company

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

Cooler Temperature(s) °C and Other Remarks. 6 2.2 4.5 = 2.2 1.5 GOR

Ver: 05/06/2024

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-178588-1
SDG Number: PFAS - Waipahu Wells II GAC, Waipio Hts I P1

Login Number: 178588
List Number: 1
Creator: Ngo, Theodore

List Source: Eurofins Eaton Analytical Pomona

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