

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

SPECIAL
PFAS - Kaamilo Wells P1/P2

JOB NUMBER

380-146410-1

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



Authorized for release by
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Definitions/Glossary

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

Qualifiers

LCMS

Qualifier	Qualifier Description
*5-	Isotope dilution analyte is outside acceptance limits, low biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

Client: City & County of Honolulu
Project: SPECIAL

Job ID: 380-146410-1

Job ID: 380-146410-1

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Job Narrative 380-146410-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 4/17/2025 10:17 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.6°C and 2.8°C.

PFAS

Method 537.1_DW_PREC: The following QC issues in preparation batch 380-148307 and analytical batch 380-148352 were observed: 13C3-GenX recovery was below QC acceptable criteria for FB sample FB: Kaamilo Wells P1 (380-146410-3). Results not acceptable per method. Field samples had detections therefore, both field samples and field blank data were excluded due to this QC failure.

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

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Detection Summary

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

Client Sample ID: Kaamilo Wells P1

Lab Sample ID: 380-146410-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	2.5		2.0	ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.0		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.3		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.6		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.4		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	3.3		2.0	ng/L	1		533	Total/NA
4-PFAS Hazard Index	0.30			NONE	1		None	Total/NA

Client Sample ID: Kaamilo Wells P2

Lab Sample ID: 380-146410-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	2.0		2.0	ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.5		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	2.4		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.9		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	2.3		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	2.4		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.0		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	2.2		2.0	ng/L	1		537.1	Total/NA
Perfluorooctanoic acid (PFOA)	2.2		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.7		2.0	ng/L	1		537.1	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.0		2.0	ng/L	1		537.1	Total/NA
4-PFAS Hazard Index	0.27			NONE	1		None	Total/NA

Client Sample ID: FB: Kaamilo Wells P1

Lab Sample ID: 380-146410-3

Sample Analysis Not Complete.

Client Sample ID: FB: Kaamilo Wells P2

Lab Sample ID: 380-146410-4

No Detections.

This Detection Summary does not include radiochemical test results.

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Client Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

Client Sample ID: Kaamilo Wells P1

Lab Sample ID: 380-146410-1

Date Collected: 04/15/25 11:08

Matrix: Drinking Water

Date Received: 04/17/25 10:17

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11CI-PF3OUdS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9CI-PF3ONS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
Perfluorobutanesulfonic acid (PFBS)	2.5		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
Perfluorohexanesulfonic acid (PFHxS)	3.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
Perfluorohexanoic acid (PFHxA)	3.3		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
Perfluorooctanesulfonic acid (PFOS)	3.6		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
Perfluorooctanoic acid (PFOA)	3.4		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
Perfluoropentanoic acid (PFPeA)	3.3		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:21	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	78		50 - 200	04/18/25 17:01	04/21/25 15:21	1
13C6 PFDA	51		50 - 200	04/18/25 17:01	04/21/25 15:21	1
13C5 PFHxA	86		50 - 200	04/18/25 17:01	04/21/25 15:21	1
13C4 PFHpA	83		50 - 200	04/18/25 17:01	04/21/25 15:21	1
13C8 PFOA	67		50 - 200	04/18/25 17:01	04/21/25 15:21	1
13C9 PFNA	59		50 - 200	04/18/25 17:01	04/21/25 15:21	1
13C7 PFUnA	52		50 - 200	04/18/25 17:01	04/21/25 15:21	1
13C2 PFDoA	55		50 - 200	04/18/25 17:01	04/21/25 15:21	1
13C4 PFBA	88		50 - 200	04/18/25 17:01	04/21/25 15:21	1
13C5 PFPeA	88		50 - 200	04/18/25 17:01	04/21/25 15:21	1
13C3 PFBS	101		50 - 200	04/18/25 17:01	04/21/25 15:21	1

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Client Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

Client Sample ID: Kaamilo Wells P1

Lab Sample ID: 380-146410-1

Date Collected: 04/15/25 11:08

Matrix: Drinking Water

Date Received: 04/17/25 10:17

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	105		50 - 200	04/18/25 17:01	04/21/25 15:21	1
13C8 PFOS	105		50 - 200	04/18/25 17:01	04/21/25 15:21	1
13C2-4:2-FTS	122		50 - 200	04/18/25 17:01	04/21/25 15:21	1
13C2-6:2-FTS	117		50 - 200	04/18/25 17:01	04/21/25 15:21	1
13C2-8:2-FTS	109		50 - 200	04/18/25 17:01	04/21/25 15:21	1

Method: EPA None - PFAS Hazard Index

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4-PFAS Hazard Index	0.30			NONE			04/19/25 20:05	1

Client Sample ID: Kaamilo Wells P2

Lab Sample ID: 380-146410-2

Date Collected: 04/15/25 10:26

Matrix: Drinking Water

Date Received: 04/17/25 10:17

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
Perfluorobutanesulfonic acid (PFBS)	2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
Perfluorohexanesulfonic acid (PFHxS)	2.5		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
Perfluorohexanoic acid (PFHxA)	2.4		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
Perfluorooctanesulfonic acid (PFOS)	2.9		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
Perfluorooctanoic acid (PFOA)	2.3		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
Perfluoropentanoic acid (PFPeA)	2.4		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1

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Client Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

Client Sample ID: Kaamilo Wells P2

Lab Sample ID: 380-146410-2

Date Collected: 04/15/25 10:26

Matrix: Drinking Water

Date Received: 04/17/25 10:17

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		04/18/25 17:01	04/21/25 15:30	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:30	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	77		50 - 200			04/18/25 17:01	04/21/25 15:30	1
13C6 PFDA	58		50 - 200			04/18/25 17:01	04/21/25 15:30	1
13C5 PFHxA	91		50 - 200			04/18/25 17:01	04/21/25 15:30	1
13C4 PFHpA	84		50 - 200			04/18/25 17:01	04/21/25 15:30	1
13C8 PFOA	73		50 - 200			04/18/25 17:01	04/21/25 15:30	1
13C9 PFNA	63		50 - 200			04/18/25 17:01	04/21/25 15:30	1
13C7 PFUnA	62		50 - 200			04/18/25 17:01	04/21/25 15:30	1
13C2 PFDoA	67		50 - 200			04/18/25 17:01	04/21/25 15:30	1
13C4 PFBA	95		50 - 200			04/18/25 17:01	04/21/25 15:30	1
13C5 PFPeA	91		50 - 200			04/18/25 17:01	04/21/25 15:30	1
13C3 PFBS	102		50 - 200			04/18/25 17:01	04/21/25 15:30	1
13C3 PFHxS	105		50 - 200			04/18/25 17:01	04/21/25 15:30	1
13C8 PFOS	104		50 - 200			04/18/25 17:01	04/21/25 15:30	1
13C2-4:2-FTS	126		50 - 200			04/18/25 17:01	04/21/25 15:30	1
13C2-6:2-FTS	116		50 - 200			04/18/25 17:01	04/21/25 15:30	1
13C2-8:2-FTS	106		50 - 200			04/18/25 17:01	04/21/25 15:30	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		04/18/25 13:45	04/19/25 20:16	1
Perfluorooctanesulfonic acid (PFOS)	3.0		2.0	ng/L		04/18/25 13:45	04/19/25 20:16	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/18/25 13:45	04/19/25 20:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		04/18/25 13:45	04/19/25 20:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		04/18/25 13:45	04/19/25 20:16	1
Perfluorohexanoic acid (PFHxA)	2.2		2.0	ng/L		04/18/25 13:45	04/19/25 20:16	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/18/25 13:45	04/19/25 20:16	1
Perfluorooctanoic acid (PFOA)	2.2		2.0	ng/L		04/18/25 13:45	04/19/25 20:16	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/18/25 13:45	04/19/25 20:16	1
Perfluorohexanesulfonic acid (PFHxS)	2.7		2.0	ng/L		04/18/25 13:45	04/19/25 20:16	1
Perfluorobutanesulfonic acid (PFBS)	2.0		2.0	ng/L		04/18/25 13:45	04/19/25 20:16	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/18/25 13:45	04/19/25 20:16	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/18/25 13:45	04/19/25 20:16	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		04/18/25 13:45	04/19/25 20:16	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		04/18/25 13:45	04/19/25 20:16	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/18/25 13:45	04/19/25 20:16	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/18/25 13:45	04/19/25 20:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/18/25 13:45	04/19/25 20:16	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

Client Sample ID: Kaamilo Wells P2

Lab Sample ID: 380-146410-2

Date Collected: 04/15/25 10:26

Matrix: Drinking Water

Date Received: 04/17/25 10:17

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	92		70 - 130	04/18/25 13:45	04/19/25 20:16	1
13C2 PFHxA	98		70 - 130	04/18/25 13:45	04/19/25 20:16	1
13C2 PFDA	100		70 - 130	04/18/25 13:45	04/19/25 20:16	1
13C3-GenX	81		70 - 130	04/18/25 13:45	04/19/25 20:16	1

Method: EPA None - PFAS Hazard Index

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4-PFAS Hazard Index	0.27			NONE			04/19/25 20:16	1

Client Sample ID: FB: Kaamilo Wells P1

Lab Sample ID: 380-146410-3

Date Collected: 04/15/25 11:08

Matrix: Drinking Water

Date Received: 04/17/25 10:17

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:40	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

Client Sample ID: FB: Kaamilo Wells P1

Date Collected: 04/15/25 11:08

Date Received: 04/17/25 10:17

Lab Sample ID: 380-146410-3

Matrix: Drinking Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	85		50 - 200	04/18/25 17:01	04/21/25 15:40	1
13C6 PFDA	108		50 - 200	04/18/25 17:01	04/21/25 15:40	1
13C5 PFHxA	115		50 - 200	04/18/25 17:01	04/21/25 15:40	1
13C4 PFHpA	114		50 - 200	04/18/25 17:01	04/21/25 15:40	1
13C8 PFOA	110		50 - 200	04/18/25 17:01	04/21/25 15:40	1
13C9 PFNA	110		50 - 200	04/18/25 17:01	04/21/25 15:40	1
13C7 PFUnA	106		50 - 200	04/18/25 17:01	04/21/25 15:40	1
13C2 PFDoA	95		50 - 200	04/18/25 17:01	04/21/25 15:40	1
13C4 PFBA	110		50 - 200	04/18/25 17:01	04/21/25 15:40	1
13C5 PFPeA	105		50 - 200	04/18/25 17:01	04/21/25 15:40	1
13C3 PFBS	102		50 - 200	04/18/25 17:01	04/21/25 15:40	1
13C3 PFHxS	105		50 - 200	04/18/25 17:01	04/21/25 15:40	1
13C8 PFOS	104		50 - 200	04/18/25 17:01	04/21/25 15:40	1
13C2-4:2-FTS	128		50 - 200	04/18/25 17:01	04/21/25 15:40	1
13C2-6:2-FTS	120		50 - 200	04/18/25 17:01	04/21/25 15:40	1
13C2-8:2-FTS	108		50 - 200	04/18/25 17:01	04/21/25 15:40	1

Client Sample ID: FB: Kaamilo Wells P2

Date Collected: 04/15/25 10:26

Date Received: 04/17/25 10:17

Lab Sample ID: 380-146410-4

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-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

Client Sample ID: FB: Kaamilo Wells P2

Lab Sample ID: 380-146410-4

Date Collected: 04/15/25 10:26

Matrix: Drinking Water

Date Received: 04/17/25 10:17

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		04/18/25 17:01	04/21/25 15:50	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	88		50 - 200			04/18/25 17:01	04/21/25 15:50	1
13C6 PFDA	107		50 - 200			04/18/25 17:01	04/21/25 15:50	1
13C5 PFHxA	110		50 - 200			04/18/25 17:01	04/21/25 15:50	1
13C4 PFHpA	108		50 - 200			04/18/25 17:01	04/21/25 15:50	1
13C8 PFOA	104		50 - 200			04/18/25 17:01	04/21/25 15:50	1
13C9 PFNA	108		50 - 200			04/18/25 17:01	04/21/25 15:50	1
13C7 PFUnA	105		50 - 200			04/18/25 17:01	04/21/25 15:50	1
13C2 PFDoA	98		50 - 200			04/18/25 17:01	04/21/25 15:50	1
13C4 PFBA	108		50 - 200			04/18/25 17:01	04/21/25 15:50	1
13C5 PFPeA	107		50 - 200			04/18/25 17:01	04/21/25 15:50	1
13C3 PFBS	103		50 - 200			04/18/25 17:01	04/21/25 15:50	1
13C3 PFHxS	105		50 - 200			04/18/25 17:01	04/21/25 15:50	1
13C8 PFOS	103		50 - 200			04/18/25 17:01	04/21/25 15:50	1
13C2-4:2-FTS	121		50 - 200			04/18/25 17:01	04/21/25 15:50	1
13C2-6:2-FTS	119		50 - 200			04/18/25 17:01	04/21/25 15:50	1
13C2-8:2-FTS	106		50 - 200			04/18/25 17:01	04/21/25 15:50	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		04/19/25 13:13	04/20/25 15:46	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/19/25 13:13	04/20/25 15:46	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/19/25 13:13	04/20/25 15:46	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		04/19/25 13:13	04/20/25 15:46	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		04/19/25 13:13	04/20/25 15:46	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/19/25 13:13	04/20/25 15:46	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/19/25 13:13	04/20/25 15:46	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/19/25 13:13	04/20/25 15:46	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/19/25 13:13	04/20/25 15:46	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/19/25 13:13	04/20/25 15:46	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/19/25 13:13	04/20/25 15:46	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/19/25 13:13	04/20/25 15:46	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/19/25 13:13	04/20/25 15:46	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		04/19/25 13:13	04/20/25 15:46	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		04/19/25 13:13	04/20/25 15:46	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/19/25 13:13	04/20/25 15:46	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/19/25 13:13	04/20/25 15:46	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

Client Sample ID: FB: Kaamilo Wells P2

Lab Sample ID: 380-146410-4

Date Collected: 04/15/25 10:26

Matrix: Drinking Water

Date Received: 04/17/25 10:17

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/19/25 13:13	04/20/25 15:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	77		70 - 130			04/19/25 13:13	04/20/25 15:46	1
13C2 PFHxA	91		70 - 130			04/19/25 13:13	04/20/25 15:46	1
13C2 PFDA	97		70 - 130			04/19/25 13:13	04/20/25 15:46	1
13C3-GenX	72		70 - 130			04/19/25 13:13	04/20/25 15:46	1

Surrogate Summary

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-146354-B-1-A MS	Matrix Spike	93	96	96	77
380-146354-C-1-A MSD	Matrix Spike Duplicate	92	101	104	92
380-146378-F-1-A MS	Matrix Spike	89	101	95	84
380-146378-G-1-A MSD	Matrix Spike Duplicate	90	100	96	87
380-146410-2	Kaamilo Wells P2	92	98	100	81
380-146410-4	FB: Kaamilo Wells P2	77	91	97	72
LCS 380-148199/22-A	Lab Control Sample	87	95	105	85
LCS 380-148307/22-A	Lab Control Sample	86	101	96	81
MBL 380-148199/20-A	Method Blank	93	102	104	92
MBL 380-148307/20-A	Method Blank	89	94	99	74
MRL 380-148199/21-A	Lab Control Sample	87	94	96	76
MRL 380-148307/21-A	Lab Control Sample	88	97	93	83

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: 380-146410-1
SDG: PFAS - Kaamilo 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)	PFDaA (50-200)
380-146410-1	Kaamilo Wells P1	78	51	86	83	67	59	52	55
380-146410-2	Kaamilo Wells P2	77	58	91	84	73	63	62	67
380-146410-3	FB: Kaamilo Wells P1	85	108	115	114	110	110	106	95
380-146410-4	FB: Kaamilo Wells P2	88	107	110	108	104	108	105	98
380-146453-B-5-A MS	Matrix Spike	88	52	94	93	77	69	49 *5-	59
380-146453-C-5-A MSD	Matrix Spike Duplicate	87	44 *5-	91	92	76	63	35 *5-	42 *5-
LCS 380-148273/24-A	Lab Control Sample	93	109	111	112	106	112	109	104
MBL 380-148273/22-A	Method Blank	90	114	114	115	113	118	108	106
MRL 380-148273/23-A	Lab Control Sample	87	112	115	119	108	112	107	103

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)
380-146410-1	Kaamilo Wells P1	88	88	101	105	105	122	117	109
380-146410-2	Kaamilo Wells P2	95	91	102	105	104	126	116	106
380-146410-3	FB: Kaamilo Wells P1	110	105	102	105	104	128	120	108
380-146410-4	FB: Kaamilo Wells P2	108	107	103	105	103	121	119	106
380-146453-B-5-A MS	Matrix Spike	89	92	106	103	103	121	124	112
380-146453-C-5-A MSD	Matrix Spike Duplicate	91	96	101	104	105	117	122	106
LCS 380-148273/24-A	Lab Control Sample	110	108	106	107	107	121	124	113
MBL 380-148273/22-A	Method Blank	112	114	107	110	108	137	132	115
MRL 380-148273/23-A	Lab Control Sample	110	109	107	109	108	130	127	115

Surrogate Legend

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

QC Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

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

Lab Sample ID: MBL 380-148273/22-A

Matrix: Drinking Water

Analysis Batch: 148439

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 148273

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<0.30		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	<0.30		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.0		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		04/18/25 17:01	04/21/25 13:33	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	90		50 - 200	04/18/25 17:01	04/21/25 13:33	1
13C6 PFDA	114		50 - 200	04/18/25 17:01	04/21/25 13:33	1
13C5 PFHxA	114		50 - 200	04/18/25 17:01	04/21/25 13:33	1
13C4 PFHpA	115		50 - 200	04/18/25 17:01	04/21/25 13:33	1
13C8 PFOA	113		50 - 200	04/18/25 17:01	04/21/25 13:33	1
13C9 PFNA	118		50 - 200	04/18/25 17:01	04/21/25 13:33	1
13C7 PFUnA	108		50 - 200	04/18/25 17:01	04/21/25 13:33	1
13C2 PFDoA	106		50 - 200	04/18/25 17:01	04/21/25 13:33	1
13C4 PFBA	112		50 - 200	04/18/25 17:01	04/21/25 13:33	1
13C5 PFPeA	114		50 - 200	04/18/25 17:01	04/21/25 13:33	1
13C3 PFBS	107		50 - 200	04/18/25 17:01	04/21/25 13:33	1
13C3 PFHxS	110		50 - 200	04/18/25 17:01	04/21/25 13:33	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

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

Lab Sample ID: MBL 380-148273/22-A

Matrix: Drinking Water

Analysis Batch: 148439

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 148273

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	108		50 - 200	04/18/25 17:01	04/21/25 13:33	1
13C2-4:2-FTS	137		50 - 200	04/18/25 17:01	04/21/25 13:33	1
13C2-6:2-FTS	132		50 - 200	04/18/25 17:01	04/21/25 13:33	1
13C2-8:2-FTS	115		50 - 200	04/18/25 17:01	04/21/25 13:33	1

Lab Sample ID: LCS 380-148273/24-A

Matrix: Drinking Water

Analysis Batch: 148439

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 148273

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	120	109		ng/L		91	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	120	107		ng/L		90	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	110		ng/L		92	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	120	110		ng/L		92	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	114		ng/L		95	70 - 130
Perfluorodecanoic acid (PFDA)	120	111		ng/L		93	70 - 130
Perfluorododecanoic acid (PFDoA)	120	112		ng/L		93	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	112		ng/L		93	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	116		ng/L		96	70 - 130
Perfluorohexanoic acid (PFHxA)	120	118		ng/L		98	70 - 130
Perfluorononanoic acid (PFNA)	120	114		ng/L		95	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	116		ng/L		97	70 - 130
Perfluorooctanoic acid (PFOA)	120	118		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	114		ng/L		95	70 - 130
Perfluorobutanoic acid (PFBA)	120	114		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	116		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	115		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	119		ng/L		99	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	111		ng/L		93	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	120		ng/L		100	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	114		ng/L		95	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	114		ng/L		95	70 - 130
Perfluoropentanoic acid (PFPeA)	120	115		ng/L		96	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	115		ng/L		96	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

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

Lab Sample ID: LCS 380-148273/24-A

Matrix: Drinking Water

Analysis Batch: 148439

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 148273

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	120	110		ng/L		92	70 - 130
		LCS	LCS				
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	93		50 - 200				
13C6 PFDA	109		50 - 200				
13C5 PFHxA	111		50 - 200				
13C4 PFHpA	112		50 - 200				
13C8 PFOA	106		50 - 200				
13C9 PFNA	112		50 - 200				
13C7 PFUnA	109		50 - 200				
13C2 PFDoA	104		50 - 200				
13C4 PFBA	110		50 - 200				
13C5 PFPeA	108		50 - 200				
13C3 PFBS	106		50 - 200				
13C3 PFHxS	107		50 - 200				
13C8 PFOS	107		50 - 200				
13C2-4:2-FTS	121		50 - 200				
13C2-6:2-FTS	124		50 - 200				
13C2-8:2-FTS	113		50 - 200				

Lab Sample ID: MRL 380-148273/23-A

Matrix: Drinking Water

Analysis Batch: 148439

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 148273

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.05	J	ng/L		102	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.00	1.89	J	ng/L		94	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.87	J	ng/L		93	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	2.00	2.07	J	ng/L		103	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.00	J	ng/L		100	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.13	J	ng/L		106	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	1.91	J	ng/L		95	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.10	J	ng/L		105	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.05	J	ng/L		102	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.03	J	ng/L		102	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.17	J	ng/L		108	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.19	J	ng/L		109	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.09	J	ng/L		104	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.16	J	ng/L		108	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

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

Lab Sample ID: MRL 380-148273/23-A

Matrix: Drinking Water

Analysis Batch: 148439

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 148273

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.12	J	ng/L		106	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.18	J	ng/L		109	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.31	J	ng/L		115	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	1.89	J	ng/L		94	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	2.00	2.18	J	ng/L		109	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	1.99	J	ng/L		99	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	1.99	J	ng/L		99	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	2.07	J	ng/L		103	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	87		50 - 200
13C6 PFDA	112		50 - 200
13C5 PFHxA	115		50 - 200
13C4 PFHpA	119		50 - 200
13C8 PFOA	108		50 - 200
13C9 PFNA	112		50 - 200
13C7 PFUnA	107		50 - 200
13C2 PFDoA	103		50 - 200
13C4 PFBA	110		50 - 200
13C5 PFPeA	109		50 - 200
13C3 PFBS	107		50 - 200
13C3 PFHxS	109		50 - 200
13C8 PFOS	108		50 - 200
13C2-4:2-FTS	130		50 - 200
13C2-6:2-FTS	127		50 - 200
13C2-8:2-FTS	115		50 - 200

Lab Sample ID: 380-146453-B-5-A MS

Matrix: Drinking Water

Analysis Batch: 148439

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 148273

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		121	107		ng/L		88	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		121	107		ng/L		89	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	102		ng/L		84	70 - 130

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QC Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

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

Lab Sample ID: 380-146453-B-5-A MS

Matrix: Drinking Water

Analysis Batch: 148439

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 148273

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		121	114		ng/L		94	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		121	114		ng/L		94	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		121	111		ng/L		92	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		121	111		ng/L		92	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		121	107		ng/L		88	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		121	113		ng/L		94	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		121	116		ng/L		95	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		121	111		ng/L		92	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		121	118		ng/L		98	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		121	115		ng/L		95	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		121	114	*5-	ng/L		95	70 - 130
Perfluorobutanoic acid (PFBA)	2.9		121	117		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	116		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	113		ng/L		93	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	114		ng/L		94	70 - 130
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		121	103		ng/L		85	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		121	119		ng/L		99	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	111		ng/L		92	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	108		ng/L		89	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		121	113		ng/L		93	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	116		ng/L		96	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	115		ng/L		95	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C3 HFPO-DA	88		50 - 200
13C6 PFDA	52		50 - 200
13C5 PFHxA	94		50 - 200
13C4 PFHpA	93		50 - 200
13C8 PFOA	77		50 - 200
13C9 PFNA	69		50 - 200
13C7 PFUnA	49	*5-	50 - 200
13C2 PFDoA	59		50 - 200
13C4 PFBA	89		50 - 200
13C5 PFPeA	92		50 - 200
13C3 PFBS	106		50 - 200
13C3 PFHxS	103		50 - 200
13C8 PFOS	103		50 - 200

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

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

Lab Sample ID: 380-146453-B-5-A MS

Matrix: Drinking Water

Analysis Batch: 148439

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 148273

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	121		50 - 200
13C2-6:2-FTS	124		50 - 200
13C2-8:2-FTS	112		50 - 200

Lab Sample ID: 380-146453-C-5-A MSD

Matrix: Drinking Water

Analysis Batch: 148439

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 148273

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		120	106		ng/L		88	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		120	104		ng/L		87	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	100		ng/L		83	70 - 130	2	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		120	112		ng/L		93	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		120	117		ng/L		97	70 - 130	3	30
Perfluorodecanoic acid (PFDA)	<2.0		120	108	*5-	ng/L		90	70 - 130	3	30
Perfluorododecanoic acid (PFDaA)	<2.0		120	112	*5-	ng/L		93	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		120	106		ng/L		88	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		120	110		ng/L		91	70 - 130	3	30
Perfluorohexanoic acid (PFHxA)	<2.0		120	120		ng/L		99	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		120	113		ng/L		93	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	114		ng/L		94	70 - 130	4	30
Perfluorooctanoic acid (PFOA)	<2.0		120	112		ng/L		93	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		120	119	*5-	ng/L		99	70 - 130	4	30
Perfluorobutanoic acid (PFBA)	2.9		120	120		ng/L		97	70 - 130	2	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	124		ng/L		103	70 - 130	6	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	113		ng/L		94	70 - 130	1	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	113		ng/L		94	70 - 130	1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	96.7		ng/L		80	70 - 130	6	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		120	122		ng/L		101	70 - 130	2	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	114		ng/L		94	70 - 130	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	110		ng/L		92	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)	<2.0		120	115		ng/L		95	70 - 130	2	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	114		ng/L		95	70 - 130	2	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	115		ng/L		95	70 - 130	0	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

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

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C3 HFPO-DA	87		50 - 200
13C6 PFDA	44	*5-	50 - 200
13C5 PFHxA	91		50 - 200
13C4 PFHpA	92		50 - 200
13C8 PFOA	76		50 - 200
13C9 PFNA	63		50 - 200
13C7 PFUnA	35	*5-	50 - 200
13C2 PFDoA	42	*5-	50 - 200
13C4 PFBA	91		50 - 200
13C5 PFPeA	96		50 - 200
13C3 PFBS	101		50 - 200
13C3 PFHxS	104		50 - 200
13C8 PFOS	105		50 - 200
13C2-4:2-FTS	117		50 - 200
13C2-6:2-FTS	122		50 - 200
13C2-8:2-FTS	106		50 - 200

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

Lab Sample ID: MBL 380-148199/20-A
Matrix: Drinking Water
Analysis Batch: 148301

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 148199

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		04/18/25 13:45	04/19/25 15:58	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		04/18/25 13:45	04/19/25 15:58	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		04/18/25 13:45	04/19/25 15:58	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		04/18/25 13:45	04/19/25 15:58	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		04/18/25 13:45	04/19/25 15:58	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		04/18/25 13:45	04/19/25 15:58	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		04/18/25 13:45	04/19/25 15:58	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		04/18/25 13:45	04/19/25 15:58	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		04/18/25 13:45	04/19/25 15:58	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		04/18/25 13:45	04/19/25 15:58	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		04/18/25 13:45	04/19/25 15:58	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		04/18/25 13:45	04/19/25 15:58	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		04/18/25 13:45	04/19/25 15:58	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		04/18/25 13:45	04/19/25 15:58	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		04/18/25 13:45	04/19/25 15:58	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		04/18/25 13:45	04/19/25 15:58	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		04/18/25 13:45	04/19/25 15:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		04/18/25 13:45	04/19/25 15:58	1
Surrogate	MBL %Recovery	MBL Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	93		70 - 130			04/18/25 13:45	04/19/25 15:58	1
13C2 PFHxA	102		70 - 130			04/18/25 13:45	04/19/25 15:58	1
13C2 PFDA	104		70 - 130			04/18/25 13:45	04/19/25 15:58	1

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QC Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

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

Lab Sample ID: MBL 380-148199/20-A
Matrix: Drinking Water
Analysis Batch: 148301

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 148199

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-GenX	92		70 - 130	04/18/25 13:45	04/19/25 15:58	1

Lab Sample ID: LCS 380-148199/22-A
Matrix: Drinking Water
Analysis Batch: 148301

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 148199

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	25.0	18.6		ng/L		75	70 - 130
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	25.0	24.6		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.0	23.7		ng/L		95	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.0	20.1		ng/L		81	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.0	19.7		ng/L		79	70 - 130
Perfluorohexanoic acid (PFHxA)	25.0	21.9		ng/L		88	70 - 130
Perfluorododecanoic acid (PFDoA)	25.0	23.2		ng/L		93	70 - 130
Perfluorooctanoic acid (PFOA)	25.0	22.2		ng/L		89	70 - 130
Perfluorodecanoic acid (PFDA)	25.0	22.6		ng/L		90	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.0	25.0		ng/L		100	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.0	22.2		ng/L		89	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.0	23.0		ng/L		92	70 - 130
Perfluorononanoic acid (PFNA)	25.0	23.1		ng/L		92	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.0	21.1		ng/L		84	70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.0	21.6		ng/L		86	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.0	23.2		ng/L		93	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.0	21.7		ng/L		87	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.0	20.4		ng/L		81	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	87		70 - 130
13C2 PFHxA	95		70 - 130
13C2 PFDA	105		70 - 130
13C3-GenX	85		70 - 130

QC Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

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

Lab Sample ID: MRL 380-148199/21-A

Matrix: Drinking Water

Analysis Batch: 148301

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 148199

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.55	J	ng/L		77	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.01	J	ng/L		101	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.00	J	ng/L		100	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	1.67	J	ng/L		83	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	1.77	J	ng/L		88	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.96	J	ng/L		98	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	1.89	J	ng/L		94	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.02	J	ng/L		101	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	1.83	J	ng/L		91	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.12	J	ng/L		106	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.04	J	ng/L		102	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	1.92	J	ng/L		96	50 - 150
Perfluorononanoic acid (PFNA)	2.00	1.80	J	ng/L		90	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	1.96	J	ng/L		98	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	1.78	J	ng/L		89	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	1.90	J	ng/L		95	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.81	J	ng/L		90	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.66	J	ng/L		83	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	87		70 - 130
13C2 PFHxA	94		70 - 130
13C2 PFDA	96		70 - 130
13C3-GenX	76		70 - 130

Lab Sample ID: 380-146354-B-1-A MS

Matrix: Drinking Water

Analysis Batch: 148301

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 148199

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	18.7		ng/L		74	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	25.0		ng/L		100	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	24.1		ng/L		96	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	23.0		ng/L		92	70 - 130

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QC Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

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

Lab Sample ID: 380-146354-B-1-A MS

Matrix: Drinking Water

Analysis Batch: 148301

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 148199

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	22.6		ng/L		90	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	25.1		ng/L		96	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	24.0		ng/L		96	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		25.1	24.6		ng/L		95	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		25.1	23.5		ng/L		94	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	26.1		ng/L		99	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	25.2		ng/L		98	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	24.2		ng/L		96	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		25.1	23.1		ng/L		92	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	23.6		ng/L		94	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	22.2		ng/L		89	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	23.5		ng/L		94	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	22.0		ng/L		88	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	22.4		ng/L		90	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
d5-NEtFOSAA	93		70 - 130
13C2 PFHxA	96		70 - 130
13C2 PFDA	96		70 - 130
13C3-GenX	77		70 - 130

Lab Sample ID: 380-146354-C-1-A MSD

Matrix: Drinking Water

Analysis Batch: 148301

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 148199

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	21.4		ng/L		85	70 - 130	14	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	24.8		ng/L		99	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	25.5		ng/L		102	70 - 130	5	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	23.1		ng/L		92	70 - 130	0	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	21.1		ng/L		84	70 - 130	7	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	25.5		ng/L		98	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	24.5		ng/L		98	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	<2.0		25.1	24.3		ng/L		94	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		25.1	23.5		ng/L		94	70 - 130	0	30

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QC Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

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

Lab Sample ID: 380-146354-C-1-A MSD

Matrix: Drinking Water

Analysis Batch: 148301

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 148199

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	26.6		ng/L		101	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	24.5		ng/L		95	70 - 130	3	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	25.1		ng/L		100	70 - 130	4	30
Perfluorononanoic acid (PFNA)	<2.0		25.1	23.8		ng/L		95	70 - 130	3	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	23.3		ng/L		93	70 - 130	1	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	23.0		ng/L		92	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	22.9		ng/L		91	70 - 130	2	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	21.8		ng/L		87	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	24.3		ng/L		97	70 - 130	8	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
d5-NEtFOSAA	92		70 - 130
13C2 PFHxA	101		70 - 130
13C2 PFDA	104		70 - 130
13C3-GenX	92		70 - 130

Lab Sample ID: MBL 380-148307/20-A

Matrix: Drinking Water

Analysis Batch: 148352

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 148307

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		04/19/25 13:13	04/20/25 13:14	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		04/19/25 13:13	04/20/25 13:14	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		04/19/25 13:13	04/20/25 13:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		04/19/25 13:13	04/20/25 13:14	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		04/19/25 13:13	04/20/25 13:14	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		04/19/25 13:13	04/20/25 13:14	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		04/19/25 13:13	04/20/25 13:14	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		04/19/25 13:13	04/20/25 13:14	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		04/19/25 13:13	04/20/25 13:14	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		04/19/25 13:13	04/20/25 13:14	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		04/19/25 13:13	04/20/25 13:14	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		04/19/25 13:13	04/20/25 13:14	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		04/19/25 13:13	04/20/25 13:14	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		04/19/25 13:13	04/20/25 13:14	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		04/19/25 13:13	04/20/25 13:14	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		04/19/25 13:13	04/20/25 13:14	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		04/19/25 13:13	04/20/25 13:14	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

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

Lab Sample ID: MBL 380-148307/20-A

Matrix: Drinking Water

Analysis Batch: 148352

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 148307

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		04/19/25 13:13	04/20/25 13:14	1
Surrogate	%Recovery	MBL Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	89		70 - 130			04/19/25 13:13	04/20/25 13:14	1
13C2 PFHxA	94		70 - 130			04/19/25 13:13	04/20/25 13:14	1
13C2 PFDA	99		70 - 130			04/19/25 13:13	04/20/25 13:14	1
13C3-GenX	74		70 - 130			04/19/25 13:13	04/20/25 13:14	1

Lab Sample ID: LCS 380-148307/22-A

Matrix: Drinking Water

Analysis Batch: 148352

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 148307

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	50.0	39.3		ng/L		79	70 - 130
Perfluorooctanesulfonic acid (PFOS)	50.0	51.4		ng/L		103	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.0	48.2		ng/L		96	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.0	46.2		ng/L		92	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.0	43.1		ng/L		86	70 - 130
Perfluorohexanoic acid (PFHxA)	50.0	49.8		ng/L		100	70 - 130
Perfluorododecanoic acid (PFDoA)	50.0	46.3		ng/L		93	70 - 130
Perfluorooctanoic acid (PFOA)	50.0	45.5		ng/L		91	70 - 130
Perfluorodecanoic acid (PFDA)	50.0	46.2		ng/L		92	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.0	51.8		ng/L		104	70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.0	52.1		ng/L		104	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.0	48.3		ng/L		97	70 - 130
Perfluorononanoic acid (PFNA)	50.0	46.5		ng/L		93	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.0	45.3		ng/L		91	70 - 130
Perfluorotridecanoic acid (PFTDA)	50.0	45.1		ng/L		90	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	50.0	49.3		ng/L		99	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	50.0	47.5		ng/L		95	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.0	48.0		ng/L		96	70 - 130
Surrogate	%Recovery	LCS Qualifier	Limits				
d5-NEtFOSAA	86		70 - 130				
13C2 PFHxA	101		70 - 130				
13C2 PFDA	96		70 - 130				

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

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

Lab Sample ID: LCS 380-148307/22-A
Matrix: Drinking Water
Analysis Batch: 148352

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 148307

Surrogate	LCS %Recovery	LCS Qualifier	Limits
13C3-GenX	81		70 - 130

Lab Sample ID: MRL 380-148307/21-A
Matrix: Drinking Water
Analysis Batch: 148352

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 148307

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	2.00	1.68	J	ng/L		84	50 - 150
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	2.00	2.09	J	ng/L		105	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.07	J	ng/L		104	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.06	J	ng/L		103	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	1.94	J	ng/L		97	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.23	J	ng/L		112	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.03	J	ng/L		102	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.03	J	ng/L		101	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.13	J	ng/L		106	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.12	J	ng/L		106	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluorononanoic acid (PFNA)	2.00	1.95	J	ng/L		98	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	1.92	J	ng/L		96	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	1.94	J	ng/L		97	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.05	J	ng/L		103	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.96	J	ng/L		98	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.04	J	ng/L		102	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	88		70 - 130
13C2 PFHxA	97		70 - 130
13C2 PFDA	93		70 - 130
13C3-GenX	83		70 - 130

QC Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

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

Lab Sample ID: 380-146378-F-1-A MS

Matrix: Drinking Water

Analysis Batch: 148444

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 148307

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	21.9		ng/L		87	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.2	26.8		ng/L		106	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.2	26.7		ng/L		106	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.2	24.1		ng/L		96	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.2	23.7		ng/L		94	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		25.2	27.2		ng/L		108	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		25.2	22.4		ng/L		89	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		25.2	25.7		ng/L		102	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		25.2	25.2		ng/L		100	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.2	25.7		ng/L		102	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.2	25.5		ng/L		101	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		25.2	25.8		ng/L		102	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		25.2	25.8		ng/L		102	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		25.2	26.1		ng/L		104	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.2	24.4		ng/L		97	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.2	24.7		ng/L		98	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.2	27.5		ng/L		109	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.2	25.6		ng/L		101	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
d5-NEtFOSAA	89		70 - 130
13C2 PFHxA	101		70 - 130
13C2 PFDA	95		70 - 130
13C3-GenX	84		70 - 130

Lab Sample ID: 380-146378-G-1-A MSD

Matrix: Drinking Water

Analysis Batch: 148444

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 148307

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.2	22.3		ng/L		88	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.2	26.0		ng/L		103	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.2	24.9		ng/L		99	70 - 130	7	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.2	23.8		ng/L		95	70 - 130	1	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

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

Lab Sample ID: 380-146378-G-1-A MSD

Matrix: Drinking Water

Analysis Batch: 148444

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 148307

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
N-ethylperfluorooctanesulfonamide doacetic acid (NEtFOSAA)	<2.0		25.2	23.5		ng/L		93	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.2	26.7		ng/L		106	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.2	22.0		ng/L		87	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		25.2	26.0		ng/L		103	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		25.2	24.6		ng/L		97	70 - 130	3	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.2	25.9		ng/L		103	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.2	26.2		ng/L		104	70 - 130	3	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.2	26.9		ng/L		107	70 - 130	4	30
Perfluorononanoic acid (PFNA)	<2.0		25.2	26.6		ng/L		105	70 - 130	3	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.2	25.7		ng/L		102	70 - 130	2	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.2	24.5		ng/L		97	70 - 130	0	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		25.2	24.1		ng/L		96	70 - 130	2	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.2	25.5		ng/L		101	70 - 130	8	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.2	25.6		ng/L		102	70 - 130	0	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
d5-NEtFOSAA	90		70 - 130
13C2 PFHxA	100		70 - 130
13C2 PFDA	96		70 - 130
13C3-GenX	87		70 - 130

QC Association Summary

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

LCMS

Prep Batch: 148199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-146410-2	Kaamilo Wells P2	Total/NA	Drinking Water	537.1 DW	
MBL 380-148199/20-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LCS 380-148199/22-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	
MRL 380-148199/21-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	
380-146354-B-1-A MS	Matrix Spike	Total/NA	Drinking Water	537.1 DW	
380-146354-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Drinking Water	537.1 DW	

Prep Batch: 148273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-146410-1	Kaamilo Wells P1	Total/NA	Drinking Water	533	
380-146410-2	Kaamilo Wells P2	Total/NA	Drinking Water	533	
380-146410-3	FB: Kaamilo Wells P1	Total/NA	Drinking Water	533	
380-146410-4	FB: Kaamilo Wells P2	Total/NA	Drinking Water	533	
MBL 380-148273/22-A	Method Blank	Total/NA	Drinking Water	533	
LCS 380-148273/24-A	Lab Control Sample	Total/NA	Drinking Water	533	
MRL 380-148273/23-A	Lab Control Sample	Total/NA	Drinking Water	533	
380-146453-B-5-A MS	Matrix Spike	Total/NA	Drinking Water	533	
380-146453-C-5-A MSD	Matrix Spike Duplicate	Total/NA	Drinking Water	533	

Analysis Batch: 148301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-146410-2	Kaamilo Wells P2	Total/NA	Drinking Water	537.1	148199
MBL 380-148199/20-A	Method Blank	Total/NA	Drinking Water	537.1	148199
LCS 380-148199/22-A	Lab Control Sample	Total/NA	Drinking Water	537.1	148199
MRL 380-148199/21-A	Lab Control Sample	Total/NA	Drinking Water	537.1	148199
380-146354-B-1-A MS	Matrix Spike	Total/NA	Drinking Water	537.1	148199
380-146354-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Drinking Water	537.1	148199

Prep Batch: 148307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-146410-4	FB: Kaamilo Wells P2	Total/NA	Drinking Water	537.1 DW	
MBL 380-148307/20-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LCS 380-148307/22-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	
MRL 380-148307/21-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	
380-146378-F-1-A MS	Matrix Spike	Total/NA	Drinking Water	537.1 DW	
380-146378-G-1-A MSD	Matrix Spike Duplicate	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 148352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-146410-4	FB: Kaamilo Wells P2	Total/NA	Drinking Water	537.1	148307
MBL 380-148307/20-A	Method Blank	Total/NA	Drinking Water	537.1	148307
LCS 380-148307/22-A	Lab Control Sample	Total/NA	Drinking Water	537.1	148307
MRL 380-148307/21-A	Lab Control Sample	Total/NA	Drinking Water	537.1	148307

Analysis Batch: 148415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-146410-1	Kaamilo Wells P1	Total/NA	Drinking Water	None	
380-146410-2	Kaamilo Wells P2	Total/NA	Drinking Water	None	

QC Association Summary

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

LCMS

Analysis Batch: 148439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-146410-1	Kaamilo Wells P1	Total/NA	Drinking Water	533	148273
380-146410-2	Kaamilo Wells P2	Total/NA	Drinking Water	533	148273
380-146410-3	FB: Kaamilo Wells P1	Total/NA	Drinking Water	533	148273
380-146410-4	FB: Kaamilo Wells P2	Total/NA	Drinking Water	533	148273
MBL 380-148273/22-A	Method Blank	Total/NA	Drinking Water	533	148273
LCS 380-148273/24-A	Lab Control Sample	Total/NA	Drinking Water	533	148273
MRL 380-148273/23-A	Lab Control Sample	Total/NA	Drinking Water	533	148273
380-146453-B-5-A MS	Matrix Spike	Total/NA	Drinking Water	533	148273
380-146453-C-5-A MSD	Matrix Spike Duplicate	Total/NA	Drinking Water	533	148273

Analysis Batch: 148444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-146378-F-1-A MS	Matrix Spike	Total/NA	Drinking Water	537.1	148307
380-146378-G-1-A MSD	Matrix Spike Duplicate	Total/NA	Drinking Water	537.1	148307

Lab Chronicle

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

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

Client Sample ID: Kaamilo Wells P1

Date Collected: 04/15/25 11:08

Date Received: 04/17/25 10:17

Lab Sample ID: 380-146410-1

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			148273	E9PK	EA POM	04/18/25 17:01
Total/NA	Analysis	533		1	148439	M7ML	EA POM	04/21/25 15:21
Total/NA	Analysis	None		1	148415	DB	EA POM	04/19/25 20:05

Client Sample ID: Kaamilo Wells P2

Date Collected: 04/15/25 10:26

Date Received: 04/17/25 10:17

Lab Sample ID: 380-146410-2

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			148273	E9PK	EA POM	04/18/25 17:01
Total/NA	Analysis	533		1	148439	M7ML	EA POM	04/21/25 15:30
Total/NA	Prep	537.1 DW			148199	E2HD	EA POM	04/18/25 13:45
Total/NA	Analysis	537.1		1	148301	M7ML	EA POM	04/19/25 20:16
Total/NA	Analysis	None		1	148415	DB	EA POM	04/19/25 20:16

Client Sample ID: FB: Kaamilo Wells P1

Date Collected: 04/15/25 11:08

Date Received: 04/17/25 10:17

Lab Sample ID: 380-146410-3

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			148273	E9PK	EA POM	04/18/25 17:01
Total/NA	Analysis	533		1	148439	M7ML	EA POM	04/21/25 15:40

Client Sample ID: FB: Kaamilo Wells P2

Date Collected: 04/15/25 10:26

Date Received: 04/17/25 10:17

Lab Sample ID: 380-146410-4

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			148273	E9PK	EA POM	04/18/25 17:01
Total/NA	Analysis	533		1	148439	M7ML	EA POM	04/21/25 15:50
Total/NA	Prep	537.1 DW			148307	N8NE	EA POM	04/19/25 13:13
Total/NA	Analysis	537.1		1	148352	SZ9R	EA POM	04/20/25 15:46

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
Project/Site: SPECIAL

Job ID: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

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: 380-146410-1
SDG: PFAS - Kaamilo 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
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: 380-146410-1
SDG: PFAS - Kaamilo Wells P1/P2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-146410-1	Kaamilo Wells P1	Drinking Water	04/15/25 11:08	04/17/25 10:17
380-146410-2	Kaamilo Wells P2	Drinking Water	04/15/25 10:26	04/17/25 10:17
380-146410-3	FB: Kaamilo Wells P1	Drinking Water	04/15/25 11:08	04/17/25 10:17
380-146410-4	FB: Kaamilo Wells P2	Drinking Water	04/15/25 10:26	04/17/25 10:17

Chain of Custody Record

Client Information		Lab PM Arada Rachelle		Carrier Tracking No(s):		COC No: 380-82899-24463 1	
Client Contact: Mr Erwin Kawata		Phone: +1 8087485840		E-Mail: Rachelle.Arada@et.eurofins.com		Page: Page 1 of 1	
Company: City & County of Honolulu		PWSID:		Analysis Requested		Job #:	
Address: 630 South Beretania Street Public Service Bldg Room 310		Due Date Requested:		TAT Requested (days):		Preservation Codes: Y - Trizma N - None L - NH4 Acetate	
City: Honolulu		State, Zip: HI 96843		Compliance Project: ☐ Yes ☐ No		Other:	
Phone: 808-748-5091(Tel)		PO #: C20525101 exp 05312023		Field Filtered Sample (Yes or No)		Total Number of Containers	
Email: ekawata@hbws.org		WFO #:		Perform MS/MSD (Yes or No)		Special Instructions/Note:	
Project Name: SPECIAL		Project #: 38000519		537 t DW, PREC - 537 t Full List		533 - All Analytes	
Site: Hawaii		SSOW#:		537 t DW, PREC - 537 t Full List		533 - All Analytes	
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Viscous, Solid, Gas, Liquid, Other)	Special Instructions/Note:	
Kaamilo Wells P1	15-Apr-2025	1108	G	Drinking Water			
Kaamilo Wells P2	15-Apr-2025	1026	G	Drinking Water			
FB: Kaamilo Wells P1	15-Apr-2025	1108					
FB: Kaamilo Wells P2	15-Apr-2025	1026					
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)		Empty Kit Relinquished by		Date/Time:		Date/Time:	
Relinquished by		Date/Time:		Date/Time:		Date/Time:	
Relinquished by		Date/Time:		Date/Time:		Date/Time:	
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No		Custody Temperature(s) °C and Other Remarks		Custody Temperature(s) °C and Other Remarks	

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-146410-1

SDG Number: PFAS - Kaamilo Wells P1/P2

Login Number: 146410

List Number: 1

Creator: Gerfen, Chris

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").	N/A	
CIO4 headspace requirement met (>50% for CA, >30% for other states).	N/A	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	