eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 9/17/2025 4:59:59 PM

JOB DESCRIPTION

INTERA - Red-Hill-Incident

JOB NUMBER

380-171284-1

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

Generated
9/17/2025 4:59:59 PM

Authorized for release by
Maria Lopez, Project Manager
Maria.Lopez@et.eurofinsus.com
(626)386-1100

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Detection Summary 6
Client Sample Results 7
Action Limit Summary 11
Surrogate Summary 12
Isotope Dilution Summary 13
QC Sample Results 14
QC Association Summary 25
Lab Chronicle 26
Certification Summary 27
Method Summary 28
Sample Summary 29
Chain of Custody 30
Receipt Checklists 31

Definitions/Glossary

Client: City & County of Honolulu
Job ID: 380-171284-1
Project/Site: INTERA - Red-Hill-Incident

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 Narrative
380-171284-1

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 9/13/2025 7:47 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.8°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: INTERA - Red-Hill-Incident

Job ID: 380-171284-1

Client Sample ID: SiteH-BWS2253-024 — Lab Sample ID: 380-171284-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.0		2.0		ng/L	1		533	Total/NA

Client Sample ID: SiteH-BWS2253-024-FB — Lab Sample ID: 380-171284-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-171284-1

Client Sample ID: SiteH-BWS2253-024
Date Collected: 09/11/25 10:30
Date Received: 09/13/25 07:47

Lab Sample ID: 380-171284-1
Matrix: 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		09/15/25 19:32	09/16/25 11:39	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
Perfluorobutanoic acid (PFBA)	**2.0**		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:39	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*77*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:39*	*1*
13C6 PFDA	*59*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:39*	*1*
13C5 PFHxA	*87*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:39*	*1*
13C4 PFHpA	*80*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:39*	*1*
13C8 PFOA	*77*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:39*	*1*
13C9 PFNA	*69*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:39*	*1*
13C7 PFUnA	*57*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:39*	*1*
13C2 PFDoA	*62*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:39*	*1*
13C4 PFBA	*93*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:39*	*1*
13C5 PFPeA	*96*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:39*	*1*
13C3 PFBS	*113*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:39*	*1*
13C3 PFHxS	*108*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:39*	*1*
13C8 PFOS	*105*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:39*	*1*

Client Sample ID: SiteH-BWS2253-024

Lab Sample ID: 380-171284-1
Date Collected: 09/11/25 10:30
Matrix: Water
Date Received: 09/13/25 07:47

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	118		50 - 200	09/15/25 19:32	09/16/25 11:39	1
13C2-6:2-FTS	108		50 - 200	09/15/25 19:32	09/16/25 11:39	1
13C2-8:2-FTS	109		50 - 200	09/15/25 19:32	09/16/25 11:39	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		09/15/25 03:31	09/15/25 22:25	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:25	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:25	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:25	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:25	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:25	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:25	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:25	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:25	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:25	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:25	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:25	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:25	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:25	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:25	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:25	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:25	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	109		70 - 130	09/15/25 03:31	09/15/25 22:25	1
13C2 PFHxA	114		70 - 130	09/15/25 03:31	09/15/25 22:25	1
13C2 PFDA	107		70 - 130	09/15/25 03:31	09/15/25 22:25	1
13C3-GenX	109		70 - 130	09/15/25 03:31	09/15/25 22:25	1

Client Sample ID: SiteH-BWS2253-024-FB

Lab Sample ID: 380-171284-2
Date Collected: 09/11/25 10:30
Matrix: Water
Date Received: 09/13/25 07:47

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		09/15/25 19:32	09/16/25 11:49	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1

Client Sample ID: SiteH-BWS2253-024-FB

Date Collected: 09/11/25 10:30
Date Received: 09/13/25 07:47

Lab Sample ID: 380-171284-2

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		09/15/25 19:32	09/16/25 11:49	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*96*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:49*	*1*
13C6 PFDA	*104*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:49*	*1*
13C5 PFHxA	*107*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:49*	*1*
13C4 PFHpA	*107*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:49*	*1*
13C8 PFOA	*109*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:49*	*1*
13C9 PFNA	*105*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:49*	*1*
13C7 PFUnA	*107*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:49*	*1*
13C2 PFDoA	*102*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:49*	*1*
13C4 PFBA	*109*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:49*	*1*
13C5 PFPeA	*111*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:49*	*1*
13C3 PFBS	*114*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:49*	*1*
13C3 PFHxS	*112*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:49*	*1*
13C8 PFOS	*108*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:49*	*1*
13C2-4:2-FTS	*117*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:49*	*1*
13C2-6:2-FTS	*108*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:49*	*1*
13C2-8:2-FTS	*104*		*50 - 200*	*09/15/25 19:32*	*09/16/25 11:49*	*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		09/15/25 03:31	09/15/25 22:36	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:36	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:36	1

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-171284-1

Client Sample ID: SiteH-BWS2253-024-FB
Date Collected: 09/11/25 10:30
Date Received: 09/13/25 07:47

Lab Sample ID: 380-171284-2
Matrix: 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		09/15/25 03:31	09/15/25 22:36	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:36	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:36	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:36	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:36	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:36	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:36	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:36	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:36	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:36	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:36	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:36	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:36	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		09/15/25 03:31	09/15/25 22:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*90*		*70 - 130*	*09/15/25 03:31*	*09/15/25 22:36*	*1*
13C2 PFHxA	*100*		*70 - 130*	*09/15/25 03:31*	*09/15/25 22:36*	*1*
13C2 PFDA	*99*		*70 - 130*	*09/15/25 03:31*	*09/15/25 22:36*	*1*
13C3-GenX	*94*		*70 - 130*	*09/15/25 03:31*	*09/15/25 22:36*	*1*

Action Limit Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-171284-1

Client Sample ID: SiteH-BWS2253-024 — Lab Sample ID: 380-171284-1

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: SiteH-BWS2253-024-FB — Lab Sample ID: 380-171284-2

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Surrogate Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-171284-1

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

Matrix: 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)
380-171108-A-1-A MS	Matrix Spike	98	102	98	95
380-171108-A-1-B MSD	Matrix Spike Duplicate	100	97	95	94
380-171284-1	SiteH-BWS2253-024	109	114	107	109
380-171284-2	SiteH-BWS2253-024-FB	90	100	99	94
LCS 380-174088/22-A	Lab Control Sample	98	102	97	98
MBL 380-174088/20-A	Method Blank	106	114	111	113
MRL 380-174088/21-A	Lab Control Sample	92	98	95	91

Surrogate Legend

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

Isotope Dilution Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-171284-1

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

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDoA (50-200)
380-171233-B-1-A MS	Matrix Spike	78	75	85	82	81	75	75	80
380-171233-C-1-A MSD	Matrix Spike Duplicate	84	95	98	93	95	95	99	96
380-171284-1	SiteH-BWS2253-024	77	59	87	80	77	69	57	62
380-171284-2	SiteH-BWS2253-024-FB	96	104	107	107	109	105	107	102
LCS 380-174236/22-A	Lab Control Sample	107	111	110	110	111	108	106	102
MBL 380-174236/20-A	Method Blank	105	110	106	109	111	108	108	106
MRL 380-174236/21-A	Lab Control Sample	104	109	112	108	112	110	106	104

		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)
380-171233-B-1-A MS	Matrix Spike	93	87	113	108	102	107	100	102
380-171233-C-1-A MSD	Matrix Spike Duplicate	102	101	113	112	110	111	101	105
380-171284-1	SiteH-BWS2253-024	93	96	113	108	105	118	108	109
380-171284-2	SiteH-BWS2253-024-FB	109	111	114	112	108	117	108	104
LCS 380-174236/22-A	Lab Control Sample	111	112	113	109	107	109	103	104
MBL 380-174236/20-A	Method Blank	111	111	114	114	109	114	106	103
MRL 380-174236/21-A	Lab Control Sample	108	113	110	110	106	114	102	99

Surrogate Legend

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

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

Lab Sample ID: MBL 380-174236/20-A
Matrix: Water
Analysis Batch: 174341

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 174236

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		09/15/25 19:32	09/16/25 08:22	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0		ng/L		09/15/25 19:32	09/16/25 08:22	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*105*		*50 - 200*	*09/15/25 19:32*	*09/16/25 08:22*	*1*
13C6 PFDA	*110*		*50 - 200*	*09/15/25 19:32*	*09/16/25 08:22*	*1*
13C5 PFHxA	*106*		*50 - 200*	*09/15/25 19:32*	*09/16/25 08:22*	*1*
13C4 PFHpA	*109*		*50 - 200*	*09/15/25 19:32*	*09/16/25 08:22*	*1*
13C8 PFOA	*111*		*50 - 200*	*09/15/25 19:32*	*09/16/25 08:22*	*1*
13C9 PFNA	*108*		*50 - 200*	*09/15/25 19:32*	*09/16/25 08:22*	*1*
13C7 PFUnA	*108*		*50 - 200*	*09/15/25 19:32*	*09/16/25 08:22*	*1*
13C2 PFDoA	*106*		*50 - 200*	*09/15/25 19:32*	*09/16/25 08:22*	*1*
13C4 PFBA	*111*		*50 - 200*	*09/15/25 19:32*	*09/16/25 08:22*	*1*
13C5 PFPeA	*111*		*50 - 200*	*09/15/25 19:32*	*09/16/25 08:22*	*1*
13C3 PFBS	*114*		*50 - 200*	*09/15/25 19:32*	*09/16/25 08:22*	*1*
13C3 PFHxS	*114*		*50 - 200*	*09/15/25 19:32*	*09/16/25 08:22*	*1*

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

Lab Sample ID: MBL 380-174236/20-A
Matrix: Water
Analysis Batch: 174341

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 174236

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	109		50 - 200	09/15/25 19:32	09/16/25 08:22	1
13C2-4:2-FTS	114		50 - 200	09/15/25 19:32	09/16/25 08:22	1
13C2-6:2-FTS	106		50 - 200	09/15/25 19:32	09/16/25 08:22	1
13C2-8:2-FTS	103		50 - 200	09/15/25 19:32	09/16/25 08:22	1

Lab Sample ID: LCS 380-174236/22-A
Matrix: Water
Analysis Batch: 174341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 174236

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	120	124		ng/L		103	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	122		ng/L		101	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	118		ng/L		98	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	116		ng/L		97	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	127		ng/L		106	70 - 130
Perfluorodecanoic acid (PFDA)	120	122		ng/L		101	70 - 130
Perfluorododecanoic acid (PFDoA)	120	121		ng/L		101	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	119		ng/L		99	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	120		ng/L		100	70 - 130
Perfluorohexanoic acid (PFHxA)	120	122		ng/L		101	70 - 130
Perfluorononanoic acid (PFNA)	120	120		ng/L		100	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	125		ng/L		104	70 - 130
Perfluorooctanoic acid (PFOA)	120	119		ng/L		99	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	121		ng/L		101	70 - 130
Perfluorobutanoic acid (PFBA)	120	118		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	119		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	116		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	121		ng/L		101	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	124		ng/L		103	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	115		ng/L		96	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	116		ng/L		97	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	111		ng/L		93	70 - 130
Perfluoropentanoic acid (PFPeA)	120	116		ng/L		96	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	121		ng/L		100	70 - 130

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

Lab Sample ID: LCS 380-174236/22-A
Matrix: Water
Analysis Batch: 174341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 174236

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluoropentanesulfonic acid (PFPeS)			120	121		ng/L		101	70 - 130		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*107*		*50 - 200*
13C6 PFDA	*111*		*50 - 200*
13C5 PFHxA	*110*		*50 - 200*
13C4 PFHpA	*110*		*50 - 200*
13C8 PFOA	*111*		*50 - 200*
13C9 PFNA	*108*		*50 - 200*
13C7 PFUnA	*106*		*50 - 200*
13C2 PFDoA	*102*		*50 - 200*
13C4 PFBA	*111*		*50 - 200*
13C5 PFPeA	*112*		*50 - 200*
13C3 PFBS	*113*		*50 - 200*
13C3 PFHxS	*109*		*50 - 200*
13C8 PFOS	*107*		*50 - 200*
13C2-4:2-FTS	*109*		*50 - 200*
13C2-6:2-FTS	*103*		*50 - 200*
13C2-8:2-FTS	*104*		*50 - 200*

Lab Sample ID: MRL 380-174236/21-A
Matrix: Water
Analysis Batch: 174341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 174236

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			2.02	2.11	J	ng/L		105	50 - 150		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			2.02	2.04	J	ng/L		101	50 - 150		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			2.02	2.20	J	ng/L		109	50 - 150		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			2.02	2.17	J	ng/L		107	50 - 150		
Perfluorobutanesulfonic acid (PFBS)			2.02	2.12	J	ng/L		105	50 - 150		
Perfluorodecanoic acid (PFDA)			2.02	2.20	J	ng/L		109	50 - 150		
Perfluorododecanoic acid (PFDoA)			2.02	2.28	J	ng/L		113	50 - 150		
Perfluoroheptanoic acid (PFHpA)			2.02	2.18	J	ng/L		108	50 - 150		
Perfluorohexanesulfonic acid (PFHxS)			2.02	1.98	J	ng/L		98	50 - 150		
Perfluorohexanoic acid (PFHxA)			2.02	2.12	J	ng/L		105	50 - 150		
Perfluorononanoic acid (PFNA)			2.02	2.22	J	ng/L		110	50 - 150		
Perfluorooctanesulfonic acid (PFOS)			2.02	2.20	J	ng/L		109	50 - 150		
Perfluorooctanoic acid (PFOA)			2.02	2.12	J	ng/L		105	50 - 150		
Perfluoroundecanoic acid (PFUnA)			2.02	2.16	J	ng/L		107	50 - 150		
Perfluorobutanoic acid (PFBA)			2.02	2.18	J	ng/L		108	50 - 150		

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

Lab Sample ID: MRL 380-174236/21-A
Matrix: Water
Analysis Batch: 174341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 174236

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.02	2.20	J	ng/L		109	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.02	2.09	J	ng/L		103	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.02	2.42	J	ng/L		120	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.02	2.15	J	ng/L		107	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.02	2.12	J	ng/L		105	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.02	2.21	J	ng/L		110	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.02	1.96	J	ng/L		97	50 - 150
Perfluoropentanoic acid (PFPeA)	2.02	2.09	J	ng/L		104	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.02	2.20	J	ng/L		109	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.02	2.07	J	ng/L		103	50 - 150

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C3 HFPO-DA	*104*		*50 - 200*
13C6 PFDA	*109*		*50 - 200*
13C5 PFHxA	*112*		*50 - 200*
13C4 PFHpA	*108*		*50 - 200*
13C8 PFOA	*112*		*50 - 200*
13C9 PFNA	*110*		*50 - 200*
13C7 PFUnA	*106*		*50 - 200*
13C2 PFDoA	*104*		*50 - 200*
13C4 PFBA	*108*		*50 - 200*
13C5 PFPeA	*113*		*50 - 200*
13C3 PFBS	*110*		*50 - 200*
13C3 PFHxS	*110*		*50 - 200*
13C8 PFOS	*106*		*50 - 200*
13C2-4:2-FTS	*114*		*50 - 200*
13C2-6:2-FTS	*102*		*50 - 200*
13C2-8:2-FTS	*99*		*50 - 200*

Lab Sample ID: 380-171233-B-1-A MS
Matrix: Water
Analysis Batch: 174341

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 174236

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.4	65.4		ng/L		108	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.4	63.5		ng/L		105	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	59.4		ng/L		98	70 - 130

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

Lab Sample ID: 380-171233-B-1-A MS
Matrix: Water
Analysis Batch: 174341

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 174236

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		60.4	61.4		ng/L		102	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.4	64.5		ng/L		107	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		60.4	61.6		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.4	62.9		ng/L		104	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	61.6		ng/L		102	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.4	61.5		ng/L		102	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		60.4	61.7		ng/L		102	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.4	63.3		ng/L		105	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.4	65.8		ng/L		109	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		60.4	59.9		ng/L		99	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	60.9		ng/L		101	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		60.4	60.6		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	63.8		ng/L		106	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	61.8		ng/L		102	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	64.0		ng/L		106	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	60.0		ng/L		99	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		60.4	59.9		ng/L		99	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	58.3		ng/L		97	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	57.5		ng/L		95	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		60.4	61.6		ng/L		102	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	63.8		ng/L		106	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	62.6		ng/L		104	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C3 HFPO-DA	*78*		*50 - 200*
13C6 PFDA	*75*		*50 - 200*
13C5 PFHxA	*85*		*50 - 200*
13C4 PFHpA	*82*		*50 - 200*
13C8 PFOA	*81*		*50 - 200*
13C9 PFNA	*75*		*50 - 200*
13C7 PFUnA	*75*		*50 - 200*
13C2 PFDoA	*80*		*50 - 200*
13C4 PFBA	*93*		*50 - 200*
13C5 PFPeA	*87*		*50 - 200*
13C3 PFBS	*113*		*50 - 200*
13C3 PFHxS	*108*		*50 - 200*
13C8 PFOS	*102*		*50 - 200*

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

Lab Sample ID: 380-171233-B-1-A MS
Matrix: Water
Analysis Batch: 174341

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 174236

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	107		50 - 200
13C2-6:2-FTS	100		50 - 200
13C2-8:2-FTS	102		50 - 200

Lab Sample ID: 380-171233-C-1-A MSD
Matrix: Water
Analysis Batch: 174341

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 174236

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	57.2		ng/L		95	70 - 130	13	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.4	58.7		ng/L		97	70 - 130	8	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	57.2		ng/L		95	70 - 130	4	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.4	60.2		ng/L		100	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.4	63.1		ng/L		104	70 - 130	2	30
Perfluorodecanoic acid (PFDA)	<2.0		60.4	62.6		ng/L		104	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.4	62.6		ng/L		104	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	62.8		ng/L		104	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.4	61.7		ng/L		102	70 - 130	0	30
Perfluorohexanoic acid (PFHxA)	<2.0		60.4	61.5		ng/L		102	70 - 130	0	30
Perfluorononanoic acid (PFNA)	<2.0		60.4	61.0		ng/L		101	70 - 130	4	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.4	63.8		ng/L		106	70 - 130	3	30
Perfluorooctanoic acid (PFOA)	<2.0		60.4	60.7		ng/L		101	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	61.4		ng/L		102	70 - 130	1	30
Perfluorobutanoic acid (PFBA)	<2.0		60.4	61.8		ng/L		102	70 - 130	2	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	62.2		ng/L		103	70 - 130	3	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	62.9		ng/L		104	70 - 130	2	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	64.5		ng/L		107	70 - 130	1	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	58.3		ng/L		97	70 - 130	3	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		60.4	58.7		ng/L		97	70 - 130	2	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	59.4		ng/L		98	70 - 130	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	55.4		ng/L		92	70 - 130	4	30
Perfluoropentanoic acid (PFPeA)	<2.0		60.4	59.8		ng/L		99	70 - 130	3	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	59.9		ng/L		99	70 - 130	6	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	61.1		ng/L		101	70 - 130	2	30

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

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C3 HFPO-DA	84		50 - 200
13C6 PFDA	95		50 - 200
13C5 PFHxA	98		50 - 200
13C4 PFHpA	93		50 - 200
13C8 PFOA	95		50 - 200
13C9 PFNA	95		50 - 200
13C7 PFUnA	99		50 - 200
13C2 PFDoA	96		50 - 200
13C4 PFBA	102		50 - 200
13C5 PFPeA	101		50 - 200
13C3 PFBS	113		50 - 200
13C3 PFHxS	112		50 - 200
13C8 PFOS	110		50 - 200
13C2-4:2-FTS	111		50 - 200
13C2-6:2-FTS	101		50 - 200
13C2-8:2-FTS	105		50 - 200

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

Lab Sample ID: MBL 380-174088/20-A
Matrix: Water
Analysis Batch: 174195

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 174088

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		09/15/25 03:31	09/15/25 18:19	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		09/15/25 03:31	09/15/25 18:19	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		09/15/25 03:31	09/15/25 18:19	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0		ng/L		09/15/25 03:31	09/15/25 18:19	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0		ng/L		09/15/25 03:31	09/15/25 18:19	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		09/15/25 03:31	09/15/25 18:19	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		09/15/25 03:31	09/15/25 18:19	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		09/15/25 03:31	09/15/25 18:19	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		09/15/25 03:31	09/15/25 18:19	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		09/15/25 03:31	09/15/25 18:19	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		09/15/25 03:31	09/15/25 18:19	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		09/15/25 03:31	09/15/25 18:19	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		09/15/25 03:31	09/15/25 18:19	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0		ng/L		09/15/25 03:31	09/15/25 18:19	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0		ng/L		09/15/25 03:31	09/15/25 18:19	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		09/15/25 03:31	09/15/25 18:19	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		09/15/25 03:31	09/15/25 18:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		09/15/25 03:31	09/15/25 18:19	1

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	106		70 - 130	09/15/25 03:31	09/15/25 18:19	1
13C2 PFHxA	114		70 - 130	09/15/25 03:31	09/15/25 18:19	1
13C2 PFDA	111		70 - 130	09/15/25 03:31	09/15/25 18:19	1

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

Lab Sample ID: MBL 380-174088/20-A
Matrix: Water
Analysis Batch: 174195

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 174088

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-GenX	113		70 - 130	09/15/25 03:31	09/15/25 18:19	1

Lab Sample ID: LCS 380-174088/22-A
Matrix: Water
Analysis Batch: 174195

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 174088

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.1	22.6		ng/L		90	70 - 130
Perfluorooctanesulfonic acid (PFOS)	25.1	22.7		ng/L		91	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.1	22.5		ng/L		90	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.1	22.9		ng/L		91	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.1	24.7		ng/L		99	70 - 130
Perfluorohexanoic acid (PFHxA)	25.1	23.1		ng/L		92	70 - 130
Perfluorododecanoic acid (PFDoA)	25.1	22.3		ng/L		89	70 - 130
Perfluorooctanoic acid (PFOA)	25.1	22.7		ng/L		91	70 - 130
Perfluorodecanoic acid (PFDA)	25.1	23.6		ng/L		94	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.1	23.6		ng/L		94	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.1	23.6		ng/L		94	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.1	23.8		ng/L		95	70 - 130
Perfluorononanoic acid (PFNA)	25.1	22.8		ng/L		91	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.1	21.0		ng/L		84	70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.1	23.1		ng/L		92	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.1	23.2		ng/L		93	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.1	22.5		ng/L		90	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.1	23.3		ng/L		93	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	98		70 - 130
13C2 PFHxA	102		70 - 130
13C2 PFDA	97		70 - 130
13C3-GenX	98		70 - 130

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

Lab Sample ID: MRL 380-174088/21-A
Matrix: Water
Analysis Batch: 174195

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 174088

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	1.95	J	ng/L		97	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.05	J	ng/L		102	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	1.86	J	ng/L		92	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.01	1.88	J	ng/L		94	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.01	1.95	J	ng/L		97	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	1.84	J	ng/L		92	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	1.82	J	ng/L		91	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	1.92	J	ng/L		96	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	1.83	J	ng/L		91	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.06	J	ng/L		102	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	1.94	J	ng/L		97	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	1.96	J	ng/L		98	50 - 150
Perfluorononanoic acid (PFNA)	2.01	1.92	J	ng/L		95	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.01	1.71	J	ng/L		85	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.01	1.87	J	ng/L		93	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	1.96	J	ng/L		98	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	1.91	J	ng/L		95	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	1.89	J	ng/L		94	50 - 150

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
d5-NEtFOSAA	*92*		*70 - 130*
13C2 PFHxA	*98*		*70 - 130*
13C2 PFDA	*95*		*70 - 130*
13C3-GenX	*91*		*70 - 130*

Lab Sample ID: 380-171108-A-1-A MS
Matrix: Water
Analysis Batch: 174195

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 174088

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	22.0		ng/L		88	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.2	24.2		ng/L		96	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.2	24.0		ng/L		96	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.2	23.7		ng/L		94	70 - 130

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

Lab Sample ID: 380-171108-A-1-A MS
Matrix: Water
Analysis Batch: 174195

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 174088

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.2	24.4		ng/L		97	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		25.2	22.9		ng/L		91	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		25.2	22.4		ng/L		89	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		25.2	23.3		ng/L		92	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		25.2	23.4		ng/L		93	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.2	24.5		ng/L		97	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.2	25.9		ng/L		103	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		25.2	24.0		ng/L		95	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		25.2	23.8		ng/L		95	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		25.2	22.8		ng/L		91	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.2	23.2		ng/L		92	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.2	24.1		ng/L		96	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.2	23.5		ng/L		93	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.2	23.6		ng/L		94	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
d5-NEtFOSAA	*98*		*70 - 130*
13C2 PFHxA	*102*		*70 - 130*
13C2 PFDA	*98*		*70 - 130*
13C3-GenX	*95*		*70 - 130*

Lab Sample ID: 380-171108-A-1-B MSD
Matrix: Water
Analysis Batch: 174195

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 174088

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		25.2	22.5		ng/L		89	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.2	23.9		ng/L		95	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.2	23.2		ng/L		92	70 - 130	4	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.2	24.5		ng/L		97	70 - 130	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.2	25.0		ng/L		99	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.2	23.2		ng/L		92	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.2	22.6		ng/L		90	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		25.2	22.9		ng/L		91	70 - 130	2	30
Perfluorodecanoic acid (PFDA)	<2.0		25.2	22.8		ng/L		90	70 - 130	3	30

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

Lab Sample ID: 380-171108-A-1-B MSD
Matrix: Water
Analysis Batch: 174195

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 174088

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.2	24.6		ng/L		98	70 - 130	0	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.2	25.1		ng/L		99	70 - 130	3	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.2	24.7		ng/L		98	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		25.2	23.2		ng/L		92	70 - 130	3	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.2	21.9		ng/L		87	70 - 130	4	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.2	23.1		ng/L		92	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.2	24.2		ng/L		96	70 - 130	0	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.2	23.5		ng/L		93	70 - 130	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.2	22.9		ng/L		91	70 - 130	3	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
d5-NEtFOSAA	*100*		*70 - 130*
13C2 PFHxA	*97*		*70 - 130*
13C2 PFDA	*95*		*70 - 130*
13C3-GenX	*94*		*70 - 130*

QC Association Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-171284-1

LCMS

Prep Batch: 174088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-171284-1	SiteH-BWS2253-024	Total/NA	Water	537.1 DW	
380-171284-2	SiteH-BWS2253-024-FB	Total/NA	Water	537.1 DW	
MBL 380-174088/20-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-174088/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-174088/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-171108-A-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-171108-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 174195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-171284-1	SiteH-BWS2253-024	Total/NA	Water	537.1	174088
380-171284-2	SiteH-BWS2253-024-FB	Total/NA	Water	537.1	174088
MBL 380-174088/20-A	Method Blank	Total/NA	Water	537.1	174088
LCS 380-174088/22-A	Lab Control Sample	Total/NA	Water	537.1	174088
MRL 380-174088/21-A	Lab Control Sample	Total/NA	Water	537.1	174088
380-171108-A-1-A MS	Matrix Spike	Total/NA	Water	537.1	174088
380-171108-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	174088

Prep Batch: 174236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-171284-1	SiteH-BWS2253-024	Total/NA	Water	533	
380-171284-2	SiteH-BWS2253-024-FB	Total/NA	Water	533	
MBL 380-174236/20-A	Method Blank	Total/NA	Water	533	
LCS 380-174236/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-174236/21-A	Lab Control Sample	Total/NA	Water	533	
380-171233-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-171233-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 174341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-171284-1	SiteH-BWS2253-024	Total/NA	Water	533	174236
380-171284-2	SiteH-BWS2253-024-FB	Total/NA	Water	533	174236
MBL 380-174236/20-A	Method Blank	Total/NA	Water	533	174236
LCS 380-174236/22-A	Lab Control Sample	Total/NA	Water	533	174236
MRL 380-174236/21-A	Lab Control Sample	Total/NA	Water	533	174236
380-171233-B-1-A MS	Matrix Spike	Total/NA	Water	533	174236
380-171233-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	174236

Lab Chronicle

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-171284-1

Client Sample ID: SiteH-BWS2253-024

Lab Sample ID: 380-171284-1

Date Collected: 09/11/25 10:30

Matrix: Water

Date Received: 09/13/25 07:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			174236	N8NE	EA POM	09/15/25 19:32
Total/NA	Analysis	533		1	174341	SZ9R	EA POM	09/16/25 11:39
Total/NA	Prep	537.1 DW			174088	G9MN	EA POM	09/15/25 03:31
Total/NA	Analysis	537.1		1	174195	M7ML	EA POM	09/15/25 22:25

Client Sample ID: SiteH-BWS2253-024-FB

Lab Sample ID: 380-171284-2

Date Collected: 09/11/25 10:30

Matrix: Water

Date Received: 09/13/25 07:47

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			174236	N8NE	EA POM	09/15/25 19:32
Total/NA	Analysis	533		1	174341	SZ9R	EA POM	09/16/25 11:49
Total/NA	Prep	537.1 DW			174088	G9MN	EA POM	09/15/25 03:31
Total/NA	Analysis	537.1		1	174195	M7ML	EA POM	09/15/25 22:36

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: 380-171284-1
Project/Site: INTERA - Red-Hill-Incident

Laboratory: Eurofins Eaton Analytical Pomona

The accreditations/certifications listed below are applicable to this report.

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

Method Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-171284-1

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA POM
537.1	Perfluorinated Alkyl Acids (LC/MS)	EPA	EA POM
533	Extraction of Perfluorinated and Polyfluorinated Alkyl Acids	EPA	EA POM
537.1 DW	Extraction of Perfluorinated Alkyl Acids	EPA	EA POM

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

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

Sample Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-171284-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-171284-1	SiteH-BWS2253-024	Water	09/11/25 10:30	09/13/25 07:47	Hawaii
380-171284-2	SiteH-BWS2253-024-FB	Water	09/11/25 10:30	09/13/25 07:47	Hawaii

Eurofins Pomona, CA
941 Corporate Center Drive
Pomona, CA 91768

Chain of Custody Record

eurofins | Environment Testing America

380-171284 COC

Client Information	Sampler	Lab PM	Carrier Tracking No(s)	COC No
Client Contact: Mr Erwin Kawata	H Bentley/E Kakone	Lopez, Maria		
Company: City & County of Honolulu	Phone: 858-205-0730	E-Mail: Maria.Lopez@et.eurofinsus.com	State of Origin: Hawaii	Page: Page 1 of 1
Address: 630 South Beretania Street	PWSID:			Job #:
City: Honolulu	Due Date Requested			
State, Zip: HI 96843	TAT Requested (days): Standard			
Phone: 808-748-5066(Tel)	Compliance Project: Δ Yes Δ No			
Email: ekawata@hbws org	PO #: C20525101 exp 05312023			
Project Name: HRS-340E - RED-HILL - INTERA	WO #:			
Site: Site H	Project #: 38000861			
	SSOW#:			

Analysis Requested

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)	SUBCONTRACT - 625 PAH Only + TICs	SUBCONTRACT - TPH 8015 D+M, JP5, JP8	8260B (MOD) Super Volatiles List	SUBCONTRACT - 8015 Gas	PFAS 533- All Analytes	PFAS 537.1_DW_PREC-537.1 Full List	PFAS 1633_DOD5_1633 Ord List	Total Number of containers
			Preservation Code:				N	Q	A	A	Z	Y	N	
SiteH-BWS2253-024	9/11/25	1030	G	Water			2	3	4	4	3	3	2	
~~SiteH-BWS2253-024-TB~~			G	~~Water~~					2	2				
SiteH-BWS2253-024-FB	9/11/25	10 30	G	Water							1	1		

Special Instructions/Note.
x = testing comes from another container.

Subcontract Notes:
625 PAH - EEA Pom -> Ship to Calscience
8015 TPH D+M, JP5, JP8 - EEA Pom
8015 Gas - EEA Pom
8260B - EEA POM
PFAS 537.1 & 533 - EEA POM
PFAS 1633 - EEA SAC
Bill and Report to EEA - Pomona

Preservation Codes

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Y - Trizma
Other:	Z - other (specify)

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: FEDEX Priority Overnight 3931 24200788

	Date/Time	Company		Date/Time	Company
Relinquished by: Hannah Bentley	9/11/25 ~~1830~~ 1830.00	INTERA Inc	Received by:	09/12/25 07:47	EEAC
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-171284-1

Login Number: 171284
List Number: 1
Creator: Tran, Kristine

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	
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	