

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

INTERA - Red-Hill-Incident
Site J

JOB NUMBER

380-169716-1

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: INTERA - Red-Hill-Incident

Job ID: 380-169716-1
SDG: Site J

Qualifiers

LCMS

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

Glossary

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

Case Narrative

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

Job ID: 380-169716-1

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Job Narrative 380-169716-1

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 9/4/2025 7:20 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: 380-169716-1
SDG: Site J

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-169716-1

☐ No Detections.

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-169716-2

☐ 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: INTERA - Red-Hill-Incident

Job ID: 380-169716-1
SDG: Site J

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-169716-1

Date Collected: 09/02/25 10:45

Matrix: Drinking Water

Date Received: 09/04/25 07:20

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		09/06/25 12:48	09/07/25 23:26	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9CI-PF3ONS)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:26	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	97		50 - 200	09/06/25 12:48	09/07/25 23:26	1
13C6 PFDA	107		50 - 200	09/06/25 12:48	09/07/25 23:26	1
13C5 PFHxA	106		50 - 200	09/06/25 12:48	09/07/25 23:26	1
13C4 PFHpA	105		50 - 200	09/06/25 12:48	09/07/25 23:26	1
13C8 PFOA	110		50 - 200	09/06/25 12:48	09/07/25 23:26	1
13C9 PFNA	112		50 - 200	09/06/25 12:48	09/07/25 23:26	1
13C7 PFUnA	108		50 - 200	09/06/25 12:48	09/07/25 23:26	1
13C2 PFDoA	105		50 - 200	09/06/25 12:48	09/07/25 23:26	1
13C4 PFBA	105		50 - 200	09/06/25 12:48	09/07/25 23:26	1
13C5 PFPeA	113		50 - 200	09/06/25 12:48	09/07/25 23:26	1
13C3 PFBS	111		50 - 200	09/06/25 12:48	09/07/25 23:26	1
13C3 PFHxS	107		50 - 200	09/06/25 12:48	09/07/25 23:26	1
13C8 PFOS	108		50 - 200	09/06/25 12:48	09/07/25 23:26	1

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Client Sample Results

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

Job ID: 380-169716-1
SDG: Site J

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-169716-1

Date Collected: 09/02/25 10:45

Matrix: Drinking Water

Date Received: 09/04/25 07:20

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	143		50 - 200	09/06/25 12:48	09/07/25 23:26	1
13C2-6:2-FTS	132		50 - 200	09/06/25 12:48	09/07/25 23:26	1
13C2-8:2-FTS	116		50 - 200	09/06/25 12:48	09/07/25 23:26	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		09/07/25 16:35	09/08/25 11:25	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:25	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:25	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:25	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:25	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:25	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:25	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:25	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:25	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:25	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:25	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:25	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:25	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:25	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:25	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:25	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:25	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:25	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	107		70 - 130			09/07/25 16:35	09/08/25 11:25	1
13C2 PFHxA	116		70 - 130			09/07/25 16:35	09/08/25 11:25	1
13C2 PFDA	111		70 - 130			09/07/25 16:35	09/08/25 11:25	1
13C3-GenX	115		70 - 130			09/07/25 16:35	09/08/25 11:25	1

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-169716-2

Date Collected: 09/02/25 10:45

Matrix: Drinking Water

Date Received: 09/04/25 07:20

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		09/06/25 12:48	09/07/25 23:35	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1

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Client Sample Results

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

Job ID: 380-169716-1
SDG: Site J

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-169716-2

Date Collected: 09/02/25 10:45

Matrix: Drinking Water

Date Received: 09/04/25 07:20

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		09/06/25 12:48	09/07/25 23:35	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/06/25 12:48	09/07/25 23:35	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	96		50 - 200	09/06/25 12:48	09/07/25 23:35	1
13C6 PFDA	111		50 - 200	09/06/25 12:48	09/07/25 23:35	1
13C5 PFHxA	109		50 - 200	09/06/25 12:48	09/07/25 23:35	1
13C4 PFHpA	111		50 - 200	09/06/25 12:48	09/07/25 23:35	1
13C8 PFOA	113		50 - 200	09/06/25 12:48	09/07/25 23:35	1
13C9 PFNA	113		50 - 200	09/06/25 12:48	09/07/25 23:35	1
13C7 PFUnA	113		50 - 200	09/06/25 12:48	09/07/25 23:35	1
13C2 PFDoA	109		50 - 200	09/06/25 12:48	09/07/25 23:35	1
13C4 PFBA	107		50 - 200	09/06/25 12:48	09/07/25 23:35	1
13C5 PFPeA	116		50 - 200	09/06/25 12:48	09/07/25 23:35	1
13C3 PFBS	110		50 - 200	09/06/25 12:48	09/07/25 23:35	1
13C3 PFHxS	107		50 - 200	09/06/25 12:48	09/07/25 23:35	1
13C8 PFOS	106		50 - 200	09/06/25 12:48	09/07/25 23:35	1
13C2-4:2-FTS	132		50 - 200	09/06/25 12:48	09/07/25 23:35	1
13C2-6:2-FTS	119		50 - 200	09/06/25 12:48	09/07/25 23:35	1
13C2-8:2-FTS	109		50 - 200	09/06/25 12:48	09/07/25 23:35	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		09/07/25 16:35	09/08/25 11:36	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:36	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:36	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-169716-1
SDG: Site J

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-169716-2

Date Collected: 09/02/25 10:45

Matrix: Drinking Water

Date Received: 09/04/25 07:20

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		09/07/25 16:35	09/08/25 11:36	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:36	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:36	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:36	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:36	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:36	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:36	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:36	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:36	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:36	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:36	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:36	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:36	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/07/25 16:35	09/08/25 11:36	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	108		70 - 130			09/07/25 16:35	09/08/25 11:36	1
13C2 PFHxA	116		70 - 130			09/07/25 16:35	09/08/25 11:36	1
13C2 PFDA	110		70 - 130			09/07/25 16:35	09/08/25 11:36	1
13C3-GenX	113		70 - 130			09/07/25 16:35	09/08/25 11:36	1

Action Limit Summary

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

Job ID: 380-169716-1
SDG: Site J

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-169716-1

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: BWS2253-J1-FB

Lab Sample ID: 380-169716-2

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: 380-169716-1
SDG: Site J

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)
380-169716-1	BWS2253-J1-AQ	107	116	111	115
380-169716-2	BWS2253-J1-FB	108	116	110	113
Surrogate Legend					
d5NEFOS = d5-NEtFOSAA					
PFHxA = 13C2 PFHxA					
PFDA = 13C2 PFDA					
GenX = 13C3-GenX					

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-169925-A-1-B MS	Matrix Spike	107	114	111	115
380-169925-A-1-C MSD	Matrix Spike Duplicate	109	119	115	116
LCS 380-172750/21-A	Lab Control Sample	110	123	117	117
MBL 380-172750/19-A	Method Blank	93	106	104	105
MRL 380-172750/20-A	Lab Control Sample	105	109	108	105
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: 380-169716-1
SDG: Site J

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)
380-169716-1	BWS2253-J1-AQ	97	107	106	105	110	112	108	105
380-169716-2	BWS2253-J1-FB	96	111	109	111	113	113	113	109

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)
380-169716-1	BWS2253-J1-AQ	105	113	111	107	108	143	132	116
380-169716-2	BWS2253-J1-FB	107	116	110	107	106	132	119	109

Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDaA (50-200)
380-169714-B-1-A MS	Matrix Spike	70	86	79	75	76	79	93	94
380-169714-B-1-B MSD	Matrix Spike Duplicate	101	106	105	100	107	109	107	101
LCS 380-172713/22-A	Lab Control Sample	100	114	112	110	114	113	114	108
MBL 380-172713/20-A	Method Blank	97	108	113	110	112	112	109	105
MRL 380-172713/21-A	Lab Control Sample	96	111	112	108	112	111	112	108

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)
380-169714-B-1-A MS	Matrix Spike	84	83	103	103	100	121	115	113
380-169714-B-1-B MSD	Matrix Spike Duplicate	101	114	110	102	104	120	114	108
LCS 380-172713/22-A	Lab Control Sample	107	110	106	109	106	122	119	113
MBL 380-172713/20-A	Method Blank	100	106	103	104	106	126	120	112
MRL 380-172713/21-A	Lab Control Sample	108	114	104	107	107	128	120	116

Surrogate Legend

HFPODA = 13C3 HFPO-DA
C6PFDA = 13C6 PFDA
13C5PHA = 13C5 PFHxA

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Isotope Dilution Summary

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

Job ID: 380-169716-1
SDG: Site J

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

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QC Sample Results

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

Job ID: 380-169716-1
SDG: Site J

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

Lab Sample ID: MBL 380-172713/20-A

Matrix: Water

Analysis Batch: 172755

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 172713

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		09/06/25 12:48	09/07/25 20:15	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	<0.30		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		09/06/25 12:48	09/07/25 20:15	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	97		50 - 200	09/06/25 12:48	09/07/25 20:15	1
13C6 PFDA	108		50 - 200	09/06/25 12:48	09/07/25 20:15	1
13C5 PFHxA	113		50 - 200	09/06/25 12:48	09/07/25 20:15	1
13C4 PFHpA	110		50 - 200	09/06/25 12:48	09/07/25 20:15	1
13C8 PFOA	112		50 - 200	09/06/25 12:48	09/07/25 20:15	1
13C9 PFNA	112		50 - 200	09/06/25 12:48	09/07/25 20:15	1
13C7 PFUnA	109		50 - 200	09/06/25 12:48	09/07/25 20:15	1
13C2 PFDoA	105		50 - 200	09/06/25 12:48	09/07/25 20:15	1
13C4 PFBA	100		50 - 200	09/06/25 12:48	09/07/25 20:15	1
13C5 PFPeA	106		50 - 200	09/06/25 12:48	09/07/25 20:15	1
13C3 PFBS	103		50 - 200	09/06/25 12:48	09/07/25 20:15	1
13C3 PFHxS	104		50 - 200	09/06/25 12:48	09/07/25 20:15	1

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QC Sample Results

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

Job ID: 380-169716-1
SDG: Site J

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

Lab Sample ID: MBL 380-172713/20-A

Matrix: Water

Analysis Batch: 172755

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 172713

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	106		50 - 200	09/06/25 12:48	09/07/25 20:15	1
13C2-4:2-FTS	126		50 - 200	09/06/25 12:48	09/07/25 20:15	1
13C2-6:2-FTS	120		50 - 200	09/06/25 12:48	09/07/25 20:15	1
13C2-8:2-FTS	112		50 - 200	09/06/25 12:48	09/07/25 20:15	1

Lab Sample ID: LCS 380-172713/22-A

Matrix: Water

Analysis Batch: 172755

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 172713

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.1	56.6		ng/L		94	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	60.1	56.1		ng/L		93	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.1	63.2		ng/L		105	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.1	62.5		ng/L		104	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.1	60.2		ng/L		100	70 - 130
Perfluorodecanoic acid (PFDA)	60.1	59.9		ng/L		100	70 - 130
Perfluorododecanoic acid (PFDoA)	60.1	61.0		ng/L		101	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.1	62.2		ng/L		103	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.1	59.7		ng/L		99	70 - 130
Perfluorohexanoic acid (PFHxA)	60.1	56.8		ng/L		95	70 - 130
Perfluorononanoic acid (PFNA)	60.1	59.9		ng/L		100	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.1	62.0		ng/L		103	70 - 130
Perfluorooctanoic acid (PFOA)	60.1	57.8		ng/L		96	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.1	59.4		ng/L		99	70 - 130
Perfluorobutanoic acid (PFBA)	60.1	60.7		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.1	60.9		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.1	61.8		ng/L		103	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.1	60.5		ng/L		101	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.1	56.5		ng/L		94	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.1	58.5		ng/L		97	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.1	56.5		ng/L		94	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.1	57.1		ng/L		95	70 - 130
Perfluoropentanoic acid (PFPeA)	60.1	57.4		ng/L		95	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.1	59.1		ng/L		98	70 - 130

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QC Sample Results

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

Job ID: 380-169716-1
SDG: Site J

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

Lab Sample ID: LCS 380-172713/22-A

Matrix: Water

Analysis Batch: 172755

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 172713

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	60.1	56.7		ng/L		94	70 - 130
LCS LCS							
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	100		50 - 200				
13C6 PFDA	114		50 - 200				
13C5 PFHxA	112		50 - 200				
13C4 PFHpA	110		50 - 200				
13C8 PFOA	114		50 - 200				
13C9 PFNA	113		50 - 200				
13C7 PFUnA	114		50 - 200				
13C2 PFDoA	108		50 - 200				
13C4 PFBA	107		50 - 200				
13C5 PFPeA	110		50 - 200				
13C3 PFBS	106		50 - 200				
13C3 PFHxS	109		50 - 200				
13C8 PFOS	106		50 - 200				
13C2-4:2-FTS	122		50 - 200				
13C2-6:2-FTS	119		50 - 200				
13C2-8:2-FTS	113		50 - 200				

Lab Sample ID: MRL 380-172713/21-A

Matrix: Water

Analysis Batch: 172755

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 172713

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.94	J	ng/L		97	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.00	1.87	J	ng/L		93	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.03	J	ng/L		102	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.18	J	ng/L		109	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.14	J	ng/L		107	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.00	J	ng/L		100	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.05	J	ng/L		102	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.97	J	ng/L		98	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.04	J	ng/L		102	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.17	J	ng/L		108	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	1.93	J	ng/L		96	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.08	J	ng/L		104	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.12	J	ng/L		106	50 - 150

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QC Sample Results

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

Job ID: 380-169716-1
SDG: Site J

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

Lab Sample ID: MRL 380-172713/21-A

Matrix: Water

Analysis Batch: 172755

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 172713

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	2.29	J	ng/L		114	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.07	J	ng/L		103	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	1.69	J	ng/L		84	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.00	2.01	J	ng/L		100	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	1.88	J	ng/L		94	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	1.90	J	ng/L		95	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	1.98	J	ng/L		99	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	2.14	J	ng/L		107	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	2.12	J	ng/L		106	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	96		50 - 200
13C6 PFDA	111		50 - 200
13C5 PFHxA	112		50 - 200
13C4 PFHpA	108		50 - 200
13C8 PFOA	112		50 - 200
13C9 PFNA	111		50 - 200
13C7 PFUnA	112		50 - 200
13C2 PFDoA	108		50 - 200
13C4 PFBA	108		50 - 200
13C5 PFPeA	114		50 - 200
13C3 PFBS	104		50 - 200
13C3 PFHxS	107		50 - 200
13C8 PFOS	107		50 - 200
13C2-4:2-FTS	128		50 - 200
13C2-6:2-FTS	120		50 - 200
13C2-8:2-FTS	116		50 - 200

Lab Sample ID: 380-169714-B-1-A MS

Matrix: Water

Analysis Batch: 172755

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 172713

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		120	114		ng/L		94	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		120	116		ng/L		96	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	114		ng/L		94	70 - 130

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QC Sample Results

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

Job ID: 380-169716-1
SDG: Site J

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

Lab Sample ID: 380-169714-B-1-A MS

Matrix: Water

Analysis Batch: 172755

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 172713

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		120	121		ng/L		100	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		120	123		ng/L		102	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		120	117		ng/L		97	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		120	121		ng/L		100	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		120	122		ng/L		100	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		120	121		ng/L		100	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		120	118		ng/L		97	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		120	120		ng/L		99	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	125		ng/L		104	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		120	116		ng/L		95	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		120	117		ng/L		97	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		120	120		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	112		ng/L		93	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	117		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	116		ng/L		96	70 - 130
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		120	109		ng/L		91	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		120	116		ng/L		96	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	108		ng/L		89	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	110		ng/L		91	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		120	114		ng/L		94	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	118		ng/L		98	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	121		ng/L		100	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C3 HFPO-DA	70		50 - 200
13C6 PFDA	86		50 - 200
13C5 PFHxA	79		50 - 200
13C4 PFHpA	75		50 - 200
13C8 PFOA	76		50 - 200
13C9 PFNA	79		50 - 200
13C7 PFUnA	93		50 - 200
13C2 PFDoA	94		50 - 200
13C4 PFBA	84		50 - 200
13C5 PFPeA	83		50 - 200
13C3 PFBS	103		50 - 200
13C3 PFHxS	103		50 - 200
13C8 PFOS	100		50 - 200

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QC Sample Results

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

Job ID: 380-169716-1
SDG: Site J

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

Lab Sample ID: 380-169714-B-1-A MS

Matrix: Water

Analysis Batch: 172755

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 172713

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	121		50 - 200
13C2-6:2-FTS	115		50 - 200
13C2-8:2-FTS	113		50 - 200

Lab Sample ID: 380-169714-B-1-B MSD

Matrix: Water

Analysis Batch: 172755

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 172713

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 (11CI-PF3OUdS)	<2.0		120	113		ng/L		94	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9CI-PF3ONS)	<2.0		120	113		ng/L		94	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	120		ng/L		100	70 - 130	6	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		120	122		ng/L		101	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		120	115		ng/L		96	70 - 130	6	30
Perfluorodecanoic acid (PFDA)	<2.0		120	118		ng/L		98	70 - 130	0	30
Perfluorododecanoic acid (PFDaA)	<2.0		120	121		ng/L		100	70 - 130	0	30
Perfluoroheptanoic acid (PFHpA)	<2.0		120	122		ng/L		101	70 - 130	0	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		120	122		ng/L		101	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<2.0		120	120		ng/L		99	70 - 130	2	30
Perfluorononanoic acid (PFNA)	<2.0		120	115		ng/L		95	70 - 130	4	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	121		ng/L		100	70 - 130	3	30
Perfluorooctanoic acid (PFOA)	<2.0		120	113		ng/L		93	70 - 130	2	30
Perfluoroundecanoic acid (PFUnA)	<2.0		120	118		ng/L		98	70 - 130	1	30
Perfluorobutanoic acid (PFBA)	<2.0		120	123		ng/L		102	70 - 130	2	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	118		ng/L		98	70 - 130	5	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	119		ng/L		99	70 - 130	2	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	116		ng/L		96	70 - 130	0	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	121		ng/L		101	70 - 130	10	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		120	111		ng/L		92	70 - 130	4	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	120		ng/L		99	70 - 130	10	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	110		ng/L		91	70 - 130	0	30
Perfluoropentanoic acid (PFPeA)	<2.0		120	111		ng/L		92	70 - 130	3	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	115		ng/L		96	70 - 130	3	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	122		ng/L		101	70 - 130	1	30

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QC Sample Results

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

Job ID: 380-169716-1
SDG: Site J

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

<i>Isotope Dilution</i>	<i>MSD %Recovery</i>	<i>MSD Qualifier</i>	<i>Limits</i>
13C3 HFPO-DA	101		50 - 200
13C6 PFDA	106		50 - 200
13C5 PFHxA	105		50 - 200
13C4 PFHpA	100		50 - 200
13C8 PFOA	107		50 - 200
13C9 PFNA	109		50 - 200
13C7 PFUnA	107		50 - 200
13C2 PFDoA	101		50 - 200
13C4 PFBA	101		50 - 200
13C5 PFPeA	114		50 - 200
13C3 PFBS	110		50 - 200
13C3 PFHxS	102		50 - 200
13C8 PFOS	104		50 - 200
13C2-4:2-FTS	120		50 - 200
13C2-6:2-FTS	114		50 - 200
13C2-8:2-FTS	108		50 - 200

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

Lab Sample ID: MBL 380-172750/19-A
Matrix: Water
Analysis Batch: 172838

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 172750

<i>Analyte</i>	<i>MBL Result</i>	<i>MBL Qualifier</i>	<i>RL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		09/07/25 16:35	09/08/25 10:00	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		09/07/25 16:35	09/08/25 10:00	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		09/07/25 16:35	09/08/25 10:00	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		09/07/25 16:35	09/08/25 10:00	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		09/07/25 16:35	09/08/25 10:00	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		09/07/25 16:35	09/08/25 10:00	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		09/07/25 16:35	09/08/25 10:00	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		09/07/25 16:35	09/08/25 10:00	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		09/07/25 16:35	09/08/25 10:00	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		09/07/25 16:35	09/08/25 10:00	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		09/07/25 16:35	09/08/25 10:00	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		09/07/25 16:35	09/08/25 10:00	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		09/07/25 16:35	09/08/25 10:00	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		09/07/25 16:35	09/08/25 10:00	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		09/07/25 16:35	09/08/25 10:00	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		09/07/25 16:35	09/08/25 10:00	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		09/07/25 16:35	09/08/25 10:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		09/07/25 16:35	09/08/25 10:00	1
<i>Surrogate</i>	<i>MBL %Recovery</i>	<i>MBL Qualifier</i>	<i>Limits</i>			<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
d5-NEtFOSAA	93		70 - 130			09/07/25 16:35	09/08/25 10:00	1
13C2 PFHxA	106		70 - 130			09/07/25 16:35	09/08/25 10:00	1
13C2 PFDA	104		70 - 130			09/07/25 16:35	09/08/25 10:00	1

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QC Sample Results

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

Job ID: 380-169716-1
SDG: Site J

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

Lab Sample ID: MBL 380-172750/19-A
Matrix: Water
Analysis Batch: 172838

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 172750

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-GenX	105		70 - 130	09/07/25 16:35	09/08/25 10:00	1

Lab Sample ID: LCS 380-172750/21-A
Matrix: Water
Analysis Batch: 172838

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 172750

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	50.2	51.6		ng/L		103	70 - 130
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	50.2	50.8		ng/L		101	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.2	52.2		ng/L		104	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.2	49.1		ng/L		98	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.2	49.1		ng/L		98	70 - 130
Perfluorohexanoic acid (PFHxA)	50.2	52.3		ng/L		104	70 - 130
Perfluorododecanoic acid (PFDoA)	50.2	51.2		ng/L		102	70 - 130
Perfluorooctanoic acid (PFOA)	50.2	53.3		ng/L		106	70 - 130
Perfluorodecanoic acid (PFDA)	50.2	53.2		ng/L		106	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.2	50.7		ng/L		101	70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.2	51.0		ng/L		102	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.2	51.8		ng/L		103	70 - 130
Perfluorononanoic acid (PFNA)	50.2	52.9		ng/L		105	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.2	49.8		ng/L		99	70 - 130
Perfluorotridecanoic acid (PFTrDA)	50.2	53.5		ng/L		107	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	50.2	50.2		ng/L		100	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	50.2	49.6		ng/L		99	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.2	52.7		ng/L		105	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	110		70 - 130
13C2 PFHxA	123		70 - 130
13C2 PFDA	117		70 - 130
13C3-GenX	117		70 - 130

QC Sample Results

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

Job ID: 380-169716-1
SDG: Site J

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

Lab Sample ID: MRL 380-172750/20-A

Matrix: Water

Analysis Batch: 172838

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 172750

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.98	J	ng/L		99	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.09	J	ng/L		105	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.09	J	ng/L		105	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	1.99	J	ng/L		99	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.14	J	ng/L		107	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.14	J	ng/L		107	50 - 150
Perfluorododecanoic acid (PFDaA)	2.00	2.09	J	ng/L		104	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.13	J	ng/L		106	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.07	J	ng/L		104	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.14	J	ng/L		107	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.06	J	ng/L		103	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.21	J	ng/L		110	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.17	J	ng/L		109	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.16	J	ng/L		108	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.15	J	ng/L		107	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	1.98	J	ng/L		99	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.03	J	ng/L		101	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	105		70 - 130
13C2 PFHxA	109		70 - 130
13C2 PFDA	108		70 - 130
13C3-GenX	105		70 - 130

Lab Sample ID: 380-169925-A-1-B MS

Matrix: Water

Analysis Batch: 172838

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 172750

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		50.2	50.9		ng/L		101	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.2	51.0		ng/L		102	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.2	52.1		ng/L		104	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.2	49.9		ng/L		99	70 - 130

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QC Sample Results

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

Job ID: 380-169716-1
SDG: Site J

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

Lab Sample ID: 380-169925-A-1-B MS

Matrix: Water

Analysis Batch: 172838

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 172750

Sample Data - 12/2023										
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.2	51.3		ng/L		102	70 - 130	
Perfluorohexanoic acid (PFHxA)	<2.0		50.2	51.3		ng/L		102	70 - 130	
Perfluorododecanoic acid (PFDoA)	<2.0		50.2	51.2		ng/L		102	70 - 130	
Perfluorooctanoic acid (PFOA)	<2.0		50.2	52.3		ng/L		104	70 - 130	
Perfluorodecanoic acid (PFDA)	<2.0		50.2	50.5		ng/L		101	70 - 130	
Perfluorohexanesulfonic acid (PFHxS)	<2.0		50.2	51.2		ng/L		102	70 - 130	
Perfluorobutanesulfonic acid (PFBS)	<2.0		50.2	52.1		ng/L		104	70 - 130	
Perfluoroheptanoic acid (PFHpA)	<2.0		50.2	51.1		ng/L		102	70 - 130	
Perfluorononanoic acid (PFNA)	<2.0		50.2	50.9		ng/L		101	70 - 130	
Perfluorotetradecanoic acid (PFTA)	<2.0		50.2	51.8		ng/L		103	70 - 130	
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.2	52.8		ng/L		105	70 - 130	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.2	50.6		ng/L		101	70 - 130	
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.2	49.8		ng/L		99	70 - 130	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.2	52.9		ng/L		105	70 - 130	
			</							

Lab Sample ID: 380-169925-A-1-C MSD

Matrix: Water

Analysis Batch: 172838

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 172750

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		50.2	52.4		ng/L		104	70 - 130	3	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.2	52.0		ng/L		104	70 - 130	2	30
Perfluoroundecanoic acid (PFUnA)	<2.0		50.2	53.9		ng/L		107	70 - 130	3	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.2	50.8		ng/L		101	70 - 130	2	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.2	50.4		ng/L		100	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		50.2	54.7		ng/L		109	70 - 130	6	30
Perfluorododecanoic acid (PFDoA)	<2.0		50.2	53.0		ng/L		106	70 - 130	3	30
Perfluorooctanoic acid (PFOA)	<2.0		50.2	53.7		ng/L		107	70 - 130	3	30
Perfluorodecanoic acid (PFDA)	<2.0		50.2	53.2		ng/L		106	70 - 130	5	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-169716-1
SDG: Site J

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

Lab Sample ID: 380-169925-A-1-C MSD

Matrix: Water

Analysis Batch: 172838

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 172750

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	<2.0		50.2	52.7		ng/L		105	70 - 130	3	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		50.2	52.0		ng/L		104	70 - 130	0	30
Perfluoroheptanoic acid (PFHpA)	<2.0		50.2	53.7		ng/L		107	70 - 130	5	30
Perfluorononanoic acid (PFNA)	<2.0		50.2	52.7		ng/L		105	70 - 130	4	30
Perfluorotetradecanoic acid (PFTA)	<2.0		50.2	52.7		ng/L		105	70 - 130	2	30
Perfluorotridecanoic acid (PFTTrDA)	<2.0		50.2	54.2		ng/L		108	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.2	51.6		ng/L		103	70 - 130	2	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.2	49.7		ng/L		99	70 - 130	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.2	54.1		ng/L		108	70 - 130	2	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
d5-NEtFOSAA	109		70 - 130
13C2 PFHxA	119		70 - 130
13C2 PFDA	115		70 - 130
13C3-GenX	116		70 - 130

QC Association Summary

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

Job ID: 380-169716-1
SDG: Site J

LCMS

Prep Batch: 172713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-169716-1	BWS2253-J1-AQ	Total/NA	Drinking Water	533	
380-169716-2	BWS2253-J1-FB	Total/NA	Drinking Water	533	
MBL 380-172713/20-A	Method Blank	Total/NA	Water	533	
LCS 380-172713/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-172713/21-A	Lab Control Sample	Total/NA	Water	533	
380-169714-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-169714-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Prep Batch: 172750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-169716-1	BWS2253-J1-AQ	Total/NA	Drinking Water	537.1 DW	
380-169716-2	BWS2253-J1-FB	Total/NA	Drinking Water	537.1 DW	
MBL 380-172750/19-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-172750/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-172750/20-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-169925-A-1-B MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-169925-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 172755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-169716-1	BWS2253-J1-AQ	Total/NA	Drinking Water	533	172713
380-169716-2	BWS2253-J1-FB	Total/NA	Drinking Water	533	172713
MBL 380-172713/20-A	Method Blank	Total/NA	Water	533	172713
LCS 380-172713/22-A	Lab Control Sample	Total/NA	Water	533	172713
MRL 380-172713/21-A	Lab Control Sample	Total/NA	Water	533	172713
380-169714-B-1-A MS	Matrix Spike	Total/NA	Water	533	172713
380-169714-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	533	172713

Analysis Batch: 172838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-169716-1	BWS2253-J1-AQ	Total/NA	Drinking Water	537.1	172750
380-169716-2	BWS2253-J1-FB	Total/NA	Drinking Water	537.1	172750
MBL 380-172750/19-A	Method Blank	Total/NA	Water	537.1	172750
LCS 380-172750/21-A	Lab Control Sample	Total/NA	Water	537.1	172750
MRL 380-172750/20-A	Lab Control Sample	Total/NA	Water	537.1	172750
380-169925-A-1-B MS	Matrix Spike	Total/NA	Water	537.1	172750
380-169925-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	172750

Lab Chronicle

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

Job ID: 380-169716-1
SDG: Site J

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-169716-1

Date Collected: 09/02/25 10:45

Matrix: Drinking Water

Date Received: 09/04/25 07:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			172713	N8NE	EA POM	09/06/25 12:48
Total/NA	Analysis	533		1	172755	SZ9R	EA POM	09/07/25 23:26
Total/NA	Prep	537.1 DW			172750	E9PK	EA POM	09/07/25 16:35
Total/NA	Analysis	537.1		1	172838	SZ9R	EA POM	09/08/25 11:25

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-169716-2

Date Collected: 09/02/25 10:45

Matrix: Drinking Water

Date Received: 09/04/25 07:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			172713	N8NE	EA POM	09/06/25 12:48
Total/NA	Analysis	533		1	172755	SZ9R	EA POM	09/07/25 23:35
Total/NA	Prep	537.1 DW			172750	E9PK	EA POM	09/07/25 16:35
Total/NA	Analysis	537.1		1	172838	SZ9R	EA POM	09/08/25 11:36

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
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-169716-1
SDG: Site J

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

- 1
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Method Summary

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

Job ID: 380-169716-1
SDG: Site J

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: 380-169716-1
SDG: Site J

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-169716-1	BWS2253-J1-AQ	Drinking Water	09/02/25 10:45	09/04/25 07:20	Hawaii
380-169716-2	BWS2253-J1-FB	Drinking Water	09/02/25 10:45	09/04/25 07:20	Hawaii

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Client Information				Sampler: H Bentley/J Joseph/E Kakone Phone: 858-205-0730 PMSID:				Lab P/L: Lopez, Maria E-Mail: Maria.Lopez@et.eurofinsus.com State of Origin: Hawaii				Carrier Tracking No(s): COC No:							
Company: Mr. Enwin Kawaia Address: 630 South Beretania Street City: Honolulu State Zip: HI 96843 Phone: 808-748-5066(Tel) Email: ekawata@hbw.org Project Name: HRS-340E - RED-HILL - INTERA Site: SSOVR Site J				Due Date Requested: TAT Requested (days): Standard Compliance Project: ☐ Yes ☒ No PO #: C20525101 exp 05312023 WO #: 38000861 Project #: 38000861				Analysis Requested				Page: Page 1 of 1 Job #:							
Sample Identification				Sample Date: 9/2/25 Sample Time: 10:45 Sample Type (C=comp, G=grab): G Matrix (W=water, S=solid, O=oil, B=issue, A=air): Water				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 4632_DOD5_4633 Sid List				Total Number of containers: 6				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 PEAS 1633 - EEA SAC Bill and Report to EEA - Pomona			
Possible Hazard Identification ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological				Deliverable Requested I II III IV, Other (specify): Empty Kit Relinquished by:				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months				Special Instructions/QC Requirements:							
Date/Time: 9/2/25 12:00 Company: INTERA Inc				Date/Time: 9/2/25 12:00 Company: INTERA Inc				Received By: [Signature] Date/Time: 9/2/25 09:20 Company: EEA				Received By: [Signature] Date/Time: 9/2/25 09:20 Company: EEA							
Custody Seals Intact: ☒ Yes ☐ No Custody Seal No				Date/Time: 9/2/25 12:00 Company: INTERA Inc				Date/Time: 9/2/25 12:00 Company: INTERA Inc				Date/Time: 9/2/25 12:00 Company: INTERA Inc							

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-169716-1

SDG Number: Site J

Login Number: 169716

List Source: Eurofins Eaton Analytical Pomona

List Number: 1

Creator: Sanchez, Joseph G

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