

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

INTERA - Red-Hill-Incident
Site J

JOB NUMBER

380-151944-1

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: 380-151944-1
SDG: Site J

Qualifiers

LCMS

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

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

Job ID: 380-151944-1

Job ID: 380-151944-1

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Job Narrative 380-151944-1

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

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

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

Receipt

The samples were received on 5/22/2025 10:06 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 0.9°C.

PFAS

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

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Detection Summary

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

Job ID: 380-151944-1
SDG: Site J

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-151944-1

☐ No Detections.

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-151944-2

☐ 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: 380-151944-1
SDG: Site J

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-151944-1

Date Collected: 05/21/25 12:30

Matrix: Drinking Water

Date Received: 05/22/25 10:06

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		05/23/25 18:54	05/30/25 13:28	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9CI-PF3ONS)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		05/23/25 18:54	05/30/25 13:28	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	80		50 - 200	05/23/25 18:54	05/30/25 13:28	1
13C6 PFDA	81		50 - 200	05/23/25 18:54	05/30/25 13:28	1
13C5 PFHxA	80		50 - 200	05/23/25 18:54	05/30/25 13:28	1
13C4 PFHpA	82		50 - 200	05/23/25 18:54	05/30/25 13:28	1
13C8 PFOA	85		50 - 200	05/23/25 18:54	05/30/25 13:28	1
13C9 PFNA	86		50 - 200	05/23/25 18:54	05/30/25 13:28	1
13C7 PFUnA	75		50 - 200	05/23/25 18:54	05/30/25 13:28	1
13C2 PFDoA	65		50 - 200	05/23/25 18:54	05/30/25 13:28	1
13C4 PFBA	98		50 - 200	05/23/25 18:54	05/30/25 13:28	1
13C5 PFPeA	113		50 - 200	05/23/25 18:54	05/30/25 13:28	1
13C3 PFBS	99		50 - 200	05/23/25 18:54	05/30/25 13:28	1
13C3 PFHxS	101		50 - 200	05/23/25 18:54	05/30/25 13:28	1
13C8 PFOS	102		50 - 200	05/23/25 18:54	05/30/25 13:28	1

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Client Sample Results

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

Job ID: 380-151944-1
SDG: Site J

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-151944-1

Date Collected: 05/21/25 12:30

Matrix: Drinking Water

Date Received: 05/22/25 10:06

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	141		50 - 200	05/23/25 18:54	05/30/25 13:28	1
13C2-6:2-FTS	146		50 - 200	05/23/25 18:54	05/30/25 13:28	1
13C2-8:2-FTS	113		50 - 200	05/23/25 18:54	05/30/25 13:28	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:29	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:29	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:29	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:29	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:29	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:29	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:29	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:29	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:29	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:29	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:29	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:29	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:29	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:29	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:29	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:29	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:29	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	113		70 - 130			05/23/25 19:11	05/24/25 17:29	1
13C2 PFHxA	106		70 - 130			05/23/25 19:11	05/24/25 17:29	1
13C2 PFDA	106		70 - 130			05/23/25 19:11	05/24/25 17:29	1
13C3-GenX	117		70 - 130			05/23/25 19:11	05/24/25 17:29	1

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-151944-2

Date Collected: 05/21/25 12:30

Matrix: Drinking Water

Date Received: 05/22/25 10:06

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		05/23/25 18:54	05/24/25 19:04	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1

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Client Sample Results

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

Job ID: 380-151944-1
SDG: Site J

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-151944-2

Date Collected: 05/21/25 12:30

Matrix: Drinking Water

Date Received: 05/22/25 10:06

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		05/23/25 18:54	05/24/25 19:04	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		05/23/25 18:54	05/24/25 19:04	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	83		50 - 200	05/23/25 18:54	05/24/25 19:04	1
13C6 PFDA	90		50 - 200	05/23/25 18:54	05/24/25 19:04	1
13C5 PFHxA	94		50 - 200	05/23/25 18:54	05/24/25 19:04	1
13C4 PFHpA	94		50 - 200	05/23/25 18:54	05/24/25 19:04	1
13C8 PFOA	93		50 - 200	05/23/25 18:54	05/24/25 19:04	1
13C9 PFNA	95		50 - 200	05/23/25 18:54	05/24/25 19:04	1
13C7 PFUnA	90		50 - 200	05/23/25 18:54	05/24/25 19:04	1
13C2 PFDoA	95		50 - 200	05/23/25 18:54	05/24/25 19:04	1
13C4 PFBA	99		50 - 200	05/23/25 18:54	05/24/25 19:04	1
13C5 PFPeA	96		50 - 200	05/23/25 18:54	05/24/25 19:04	1
13C3 PFBS	98		50 - 200	05/23/25 18:54	05/24/25 19:04	1
13C3 PFHxS	100		50 - 200	05/23/25 18:54	05/24/25 19:04	1
13C8 PFOS	103		50 - 200	05/23/25 18:54	05/24/25 19:04	1
13C2-4:2-FTS	114		50 - 200	05/23/25 18:54	05/24/25 19:04	1
13C2-6:2-FTS	110		50 - 200	05/23/25 18:54	05/24/25 19:04	1
13C2-8:2-FTS	96		50 - 200	05/23/25 18:54	05/24/25 19:04	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		05/23/25 19:11	05/24/25 17:38	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:38	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:38	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-151944-1
SDG: Site J

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-151944-2

Date Collected: 05/21/25 12:30

Matrix: Drinking Water

Date Received: 05/22/25 10:06

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		05/23/25 19:11	05/24/25 17:38	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:38	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:38	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:38	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:38	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:38	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:38	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:38	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:38	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:38	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:38	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:38	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:38	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		05/23/25 19:11	05/24/25 17:38	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	94		70 - 130			05/23/25 19:11	05/24/25 17:38	1
13C2 PFHxA	109		70 - 130			05/23/25 19:11	05/24/25 17:38	1
13C2 PFDA	105		70 - 130			05/23/25 19:11	05/24/25 17:38	1
13C3-GenX	96		70 - 130			05/23/25 19:11	05/24/25 17:38	1

Action Limit Summary

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

Job ID: 380-151944-1
SDG: Site J

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-151944-1

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: 380-151944-2

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: 380-151944-1
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)				
380-151944-1	BWS2253-J1-AQ	113	106	106	117				
380-151944-2	BWS2253-J1-FB	94	109	105	96				
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)				
380-151645-B-1-A MS	Matrix Spike	110	101	113	109				
380-151645-C-1-A MSD	Matrix Spike Duplicate	108	100	112	106				
LCS 380-154245/21-A	Lab Control Sample	103	110	109	99				
MBL 380-154245/19-A	Method Blank	99	110	116	93				
MRL 380-154245/20-A	Lab Control Sample	98	104	111	95				
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: 380-151944-1
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)
380-151944-1	BWS2253-J1-AQ	80	81	80	82	85	86	75	65
380-151944-2	BWS2253-J1-FB	83	90	94	94	93	95	90	95

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)
380-151944-1	BWS2253-J1-AQ	98	113	99	101	102	141	146	113
380-151944-2	BWS2253-J1-FB	99	96	98	100	103	114	110	96

Surrogate Legend

HFPODA = 13C3 HFPO-DA
C6PFDA = 13C6 PFDA
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
13C7PUA = 13C7 PFUnA
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)
380-152013-B-1-A MS	Matrix Spike	91	97	96	98	97	97	97	98
380-152013-C-1-A MSD	Matrix Spike Duplicate	86	95	94	95	95	96	93	98
LCS 380-154238/24-A	Lab Control Sample	86	97	93	98	97	95	94	97
MBL 380-154238/22-A	Method Blank	88	99	102	101	101	99	96	97
MRL 380-154238/23-A	Lab Control Sample	86	99	102	101	100	103	96	99

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-152013-B-1-A MS	Matrix Spike	101	99	98	100	99	107	106	104
380-152013-C-1-A MSD	Matrix Spike Duplicate	100	98	98	101	99	112	102	101
LCS 380-154238/24-A	Lab Control Sample	101	100	99	100	102	110	108	104
MBL 380-154238/22-A	Method Blank	104	103	106	105	105	124	114	105
MRL 380-154238/23-A	Lab Control Sample	103	101	105	105	105	118	109	103

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: 380-151944-1
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: 380-151944-1
SDG: Site J

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

Lab Sample ID: MBL 380-154238/22-A

Matrix: Water

Analysis Batch: 154283

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 154238

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		05/23/25 18:54	05/24/25 17:36	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	<0.30		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		05/23/25 18:54	05/24/25 17:36	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	88		50 - 200	05/23/25 18:54	05/24/25 17:36	1
13C6 PFDA	99		50 - 200	05/23/25 18:54	05/24/25 17:36	1
13C5 PFHxA	102		50 - 200	05/23/25 18:54	05/24/25 17:36	1
13C4 PFHpA	101		50 - 200	05/23/25 18:54	05/24/25 17:36	1
13C8 PFOA	101		50 - 200	05/23/25 18:54	05/24/25 17:36	1
13C9 PFNA	99		50 - 200	05/23/25 18:54	05/24/25 17:36	1
13C7 PFUnA	96		50 - 200	05/23/25 18:54	05/24/25 17:36	1
13C2 PFDoA	97		50 - 200	05/23/25 18:54	05/24/25 17:36	1
13C4 PFBA	104		50 - 200	05/23/25 18:54	05/24/25 17:36	1
13C5 PFPeA	103		50 - 200	05/23/25 18:54	05/24/25 17:36	1
13C3 PFBS	106		50 - 200	05/23/25 18:54	05/24/25 17:36	1
13C3 PFHxS	105		50 - 200	05/23/25 18:54	05/24/25 17:36	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-151944-1
SDG: Site J

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

Lab Sample ID: MBL 380-154238/22-A

Matrix: Water

Analysis Batch: 154283

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 154238

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	105		50 - 200	05/23/25 18:54	05/24/25 17:36	1
13C2-4:2-FTS	124		50 - 200	05/23/25 18:54	05/24/25 17:36	1
13C2-6:2-FTS	114		50 - 200	05/23/25 18:54	05/24/25 17:36	1
13C2-8:2-FTS	105		50 - 200	05/23/25 18:54	05/24/25 17:36	1

Lab Sample ID: LCS 380-154238/24-A

Matrix: Water

Analysis Batch: 154283

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 154238

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	120	115		ng/L		96	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	120	112		ng/L		93	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	111		ng/L		92	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	116		ng/L		96	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	117		ng/L		97	70 - 130
Perfluorodecanoic acid (PFDA)	120	114		ng/L		95	70 - 130
Perfluorododecanoic acid (PFDoA)	120	116		ng/L		97	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	114		ng/L		95	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	116		ng/L		97	70 - 130
Perfluorohexanoic acid (PFHxA)	120	116		ng/L		97	70 - 130
Perfluorononanoic acid (PFNA)	120	117		ng/L		97	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	115		ng/L		96	70 - 130
Perfluorooctanoic acid (PFOA)	120	118		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	119		ng/L		99	70 - 130
Perfluorobutanoic acid (PFBA)	120	117		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	114		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	119		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	115		ng/L		95	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	113		ng/L		94	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	120	118		ng/L		98	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	110		ng/L		92	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	112		ng/L		93	70 - 130
Perfluoropentanoic acid (PFPeA)	120	112		ng/L		93	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	117		ng/L		97	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-151944-1
SDG: Site J

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

Lab Sample ID: LCS 380-154238/24-A

Matrix: Water

Analysis Batch: 154283

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 154238

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	120	117		ng/L		97	70 - 130
	LCS	LCS					
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	86		50 - 200				
13C6 PFDA	97		50 - 200				
13C5 PFHxA	93		50 - 200				
13C4 PFHpA	98		50 - 200				
13C8 PFOA	97		50 - 200				
13C9 PFNA	95		50 - 200				
13C7 PFUnA	94		50 - 200				
13C2 PFDoA	97		50 - 200				
13C4 PFBA	101		50 - 200				
13C5 PFPeA	100		50 - 200				
13C3 PFBS	99		50 - 200				
13C3 PFHxS	100		50 - 200				
13C8 PFOS	102		50 - 200				
13C2-4:2-FTS	110		50 - 200				
13C2-6:2-FTS	108		50 - 200				
13C2-8:2-FTS	104		50 - 200				

Lab Sample ID: MRL 380-154238/23-A

Matrix: Water

Analysis Batch: 154283

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 154238

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.19	J	ng/L		109	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.00	2.06	J	ng/L		103	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.16	J	ng/L		108	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.01	J	ng/L		100	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.15	J	ng/L		108	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.17	J	ng/L		108	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.17	J	ng/L		109	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.17	J	ng/L		109	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.30	J	ng/L		115	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.23	J	ng/L		112	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.17	J	ng/L		109	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.22	J	ng/L		111	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-151944-1
SDG: Site J

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

Lab Sample ID: MRL 380-154238/23-A

Matrix: Water

Analysis Batch: 154283

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 154238

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.28	J	ng/L		114	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.27	J	ng/L		113	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.21	J	ng/L		111	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	2.05	J	ng/L		102	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.00	2.08	J	ng/L		104	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.05	J	ng/L		102	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	2.04	J	ng/L		102	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.09	J	ng/L		105	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	2.05	J	ng/L		103	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	2.03	J	ng/L		102	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	86		50 - 200
13C6 PFDA	99		50 - 200
13C5 PFHxA	102		50 - 200
13C4 PFHpA	101		50 - 200
13C8 PFOA	100		50 - 200
13C9 PFNA	103		50 - 200
13C7 PFUnA	96		50 - 200
13C2 PFDoA	99		50 - 200
13C4 PFBA	103		50 - 200
13C5 PFPeA	101		50 - 200
13C3 PFBS	105		50 - 200
13C3 PFHxS	105		50 - 200
13C8 PFOS	105		50 - 200
13C2-4:2-FTS	118		50 - 200
13C2-6:2-FTS	109		50 - 200
13C2-8:2-FTS	103		50 - 200

Lab Sample ID: 380-152013-B-1-A MS

Matrix: Water

Analysis Batch: 154283

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 154238

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		121	118		ng/L		97	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		121	117		ng/L		97	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	121		ng/L		100	70 - 130

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QC Sample Results

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

Job ID: 380-151944-1
SDG: Site J

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

Lab Sample ID: 380-152013-B-1-A MS

Matrix: Water

Analysis Batch: 154283

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 154238

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		121	115		ng/L		95	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		121	117		ng/L		97	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		121	118		ng/L		98	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		121	118		ng/L		98	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		121	119		ng/L		98	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		121	118		ng/L		98	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		121	117		ng/L		97	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		121	120		ng/L		100	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		121	119		ng/L		99	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		121	123		ng/L		102	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		121	119		ng/L		98	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		121	122		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	118		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	119		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	120		ng/L		99	70 - 130
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		121	118		ng/L		98	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		121	118		ng/L		97	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	116		ng/L		96	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	119		ng/L		99	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		121	121		ng/L		100	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	122		ng/L		101	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	120		ng/L		99	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C3 HFPO-DA	91		50 - 200
13C6 PFDA	97		50 - 200
13C5 PFHxA	96		50 - 200
13C4 PFHpA	98		50 - 200
13C8 PFOA	97		50 - 200
13C9 PFNA	97		50 - 200
13C7 PFUnA	97		50 - 200
13C2 PFDoA	98		50 - 200
13C4 PFBA	101		50 - 200
13C5 PFPeA	99		50 - 200
13C3 PFBS	98		50 - 200
13C3 PFHxS	100		50 - 200
13C8 PFOS	99		50 - 200

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QC Sample Results

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

Job ID: 380-151944-1
SDG: Site J

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

Lab Sample ID: 380-152013-B-1-A MS

Matrix: Water

Analysis Batch: 154283

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 154238

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	107		50 - 200
13C2-6:2-FTS	106		50 - 200
13C2-8:2-FTS	104		50 - 200

Lab Sample ID: 380-152013-C-1-A MSD

Matrix: Water

Analysis Batch: 154283

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 154238

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		120	117		ng/L		98	70 - 130	0	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		120	115		ng/L		96	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	118		ng/L		98	70 - 130	2	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		120	116		ng/L		97	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		120	117		ng/L		97	70 - 130	0	30
Perfluorodecanoic acid (PFDA)	<2.0		120	119		ng/L		99	70 - 130	0	30
Perfluorododecanoic acid (PFDaA)	<2.0		120	116		ng/L		96	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	<2.0		120	117		ng/L		97	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		120	114		ng/L		95	70 - 130	4	30
Perfluorohexanoic acid (PFHxA)	<2.0		120	115		ng/L		96	70 - 130	2	30
Perfluorononanoic acid (PFNA)	<2.0		120	120		ng/L		99	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	117		ng/L		97	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	<2.0		120	120		ng/L		100	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		120	121		ng/L		101	70 - 130	2	30
Perfluorobutanoic acid (PFBA)	<2.0		120	118		ng/L		98	70 - 130	4	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	120		ng/L		100	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	117		ng/L		98	70 - 130	1	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	120		ng/L		100	70 - 130	0	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	114		ng/L		95	70 - 130	3	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		120	116		ng/L		96	70 - 130	2	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	115		ng/L		95	70 - 130	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	112		ng/L		93	70 - 130	6	30
Perfluoropentanoic acid (PFPeA)	<2.0		120	117		ng/L		97	70 - 130	3	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	120		ng/L		100	70 - 130	2	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	116		ng/L		97	70 - 130	3	30

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QC Sample Results

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

Job ID: 380-151944-1
SDG: Site J

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

Isotope Dilution	MSD MSD		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	86		50 - 200
13C6 PFDA	95		50 - 200
13C5 PFHxA	94		50 - 200
13C4 PFHpA	95		50 - 200
13C8 PFOA	95		50 - 200
13C9 PFNA	96		50 - 200
13C7 PFUnA	93		50 - 200
13C2 PFDoA	98		50 - 200
13C4 PFBA	100		50 - 200
13C5 PFPeA	98		50 - 200
13C3 PFBS	98		50 - 200
13C3 PFHxS	101		50 - 200
13C8 PFOS	99		50 - 200
13C2-4:2-FTS	112		50 - 200
13C2-6:2-FTS	102		50 - 200
13C2-8:2-FTS	101		50 - 200

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

Lab Sample ID: MBL 380-154245/19-A
Matrix: Water
Analysis Batch: 154292

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 154245

Analyte	MBL MBL		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		05/23/25 19:11	05/24/25 16:12	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		05/23/25 19:11	05/24/25 16:12	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		05/23/25 19:11	05/24/25 16:12	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		05/23/25 19:11	05/24/25 16:12	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		05/23/25 19:11	05/24/25 16:12	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		05/23/25 19:11	05/24/25 16:12	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		05/23/25 19:11	05/24/25 16:12	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		05/23/25 19:11	05/24/25 16:12	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		05/23/25 19:11	05/24/25 16:12	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		05/23/25 19:11	05/24/25 16:12	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		05/23/25 19:11	05/24/25 16:12	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		05/23/25 19:11	05/24/25 16:12	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		05/23/25 19:11	05/24/25 16:12	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		05/23/25 19:11	05/24/25 16:12	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		05/23/25 19:11	05/24/25 16:12	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		05/23/25 19:11	05/24/25 16:12	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		05/23/25 19:11	05/24/25 16:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		05/23/25 19:11	05/24/25 16:12	1
Surrogate	MBL MBL		Limits			Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
d5-NEtFOSAA	99		70 - 130			05/23/25 19:11	05/24/25 16:12	1
13C2 PFHxA	110		70 - 130			05/23/25 19:11	05/24/25 16:12	1
13C2 PFDA	116		70 - 130			05/23/25 19:11	05/24/25 16:12	1

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QC Sample Results

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

Job ID: 380-151944-1
SDG: Site J

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

Lab Sample ID: MBL 380-154245/19-A
Matrix: Water
Analysis Batch: 154292

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 154245

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-GenX	93		70 - 130	05/23/25 19:11	05/24/25 16:12	1

Lab Sample ID: LCS 380-154245/21-A
Matrix: Water
Analysis Batch: 154292

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 154245

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	25.1	22.6		ng/L		90	70 - 130
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	25.1	26.8		ng/L		107	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.1	25.4		ng/L		102	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.1	26.0		ng/L		104	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.1	24.8		ng/L		99	70 - 130
Perfluorohexanoic acid (PFHxA)	25.1	26.9		ng/L		107	70 - 130
Perfluorododecanoic acid (PFDoA)	25.1	24.3		ng/L		97	70 - 130
Perfluorooctanoic acid (PFOA)	25.1	26.6		ng/L		106	70 - 130
Perfluorodecanoic acid (PFDA)	25.1	25.7		ng/L		103	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.1	26.9		ng/L		107	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.1	27.0		ng/L		108	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.1	25.6		ng/L		102	70 - 130
Perfluorononanoic acid (PFNA)	25.1	25.8		ng/L		103	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.1	21.8		ng/L		87	70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.1	26.0		ng/L		104	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.1	26.8		ng/L		107	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.1	25.2		ng/L		101	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.1	25.9		ng/L		104	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	103		70 - 130
13C2 PFHxA	110		70 - 130
13C2 PFDA	109		70 - 130
13C3-GenX	99		70 - 130

QC Sample Results

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

Job ID: 380-151944-1
SDG: Site J

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

Lab Sample ID: MRL 380-154245/20-A

Matrix: Water

Analysis Batch: 154292

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 154245

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.87	J	ng/L		93	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.16	J	ng/L		108	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.03	J	ng/L		101	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.02	J	ng/L		101	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	1.88	J	ng/L		94	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.01	J	ng/L		100	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	1.96	J	ng/L		98	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.09	J	ng/L		105	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.15	J	ng/L		108	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.98	J	ng/L		99	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.04	J	ng/L		102	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.01	J	ng/L		100	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	1.85	J	ng/L		92	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.03	J	ng/L		102	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.14	J	ng/L		107	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.05	J	ng/L		102	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	98		70 - 130
13C2 PFHxA	104		70 - 130
13C2 PFDA	111		70 - 130
13C3-GenX	95		70 - 130

Lab Sample ID: 380-151645-B-1-A MS

Matrix: Water

Analysis Batch: 154292

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 154245

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	48.6		ng/L		97	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.2	53.6		ng/L		107	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.2	50.2		ng/L		100	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: 380-151944-1
SDG: Site J

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

Lab Sample ID: 380-151645-B-1-A MS

Matrix: Water

Analysis Batch: 154292

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 154245

Sample Data: 10/12/2022									
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.2	50.3		ng/L		100	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		50.2	48.9		ng/L		96	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		50.2	46.6		ng/L		93	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		50.2	50.6		ng/L		100	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		50.2	50.9		ng/L		101	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		50.2	53.2		ng/L		105	70 - 130
Perfluorobutanesulfonic acid (PFBS)	15		50.2	65.6		ng/L		100	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		50.2	46.1		ng/L		92	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		50.2	52.3		ng/L		104	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0	F1	50.2	36.4		ng/L		73	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.2	45.1		ng/L		90	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.2	50.4		ng/L		100	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.2	45.2		ng/L		90	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.2	49.6		ng/L		99	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
d5-NEtFOSAA	110		70 - 130						
13C2 PFHxA	101		70 - 130						
13C2 PFDA	113		70 - 130						
13C3-GenX	109		70 - 130						

Lab Sample ID: 380-151645-C-1-A MSD

Matrix: Water

Analysis Batch: 154292

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 154245

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		50.3	47.4		ng/L		94	70 - 130	3	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.3	53.9		ng/L		107	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		50.3	48.5		ng/L		96	70 - 130	4	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.3	49.5		ng/L		98	70 - 130	1	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.3	51.1		ng/L		102	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		50.3	45.7		ng/L		90	70 - 130	7	30
Perfluorododecanoic acid (PFDoA)	<2.0		50.3	46.9		ng/L		93	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		50.3	50.9		ng/L		100	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		50.3	50.8		ng/L		101	70 - 130	0	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-151944-1
SDG: Site J

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

Lab Sample ID: 380-151645-C-1-A MSD

Matrix: Water

Analysis Batch: 154292

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 154245

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	<2.0		50.3	52.7		ng/L		104	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	15		50.3	65.9		ng/L		101	70 - 130	0	30
Perfluoroheptanoic acid (PFHpA)	<2.0		50.3	44.1		ng/L		88	70 - 130	4	30
Perfluorononanoic acid (PFNA)	<2.0		50.3	51.9		ng/L		103	70 - 130	1	30
Perfluorotetradecanoic acid (PFTA)	<2.0	F1	50.3	34.9	F1	ng/L		69	70 - 130	4	30
Perfluorotridecanoic acid (PFTTrDA)	<2.0		50.3	43.8		ng/L		87	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.3	51.2		ng/L		102	70 - 130	2	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.3	44.1		ng/L		88	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.3	50.0		ng/L		99	70 - 130	1	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
d5-NEtFOSAA	108		70 - 130								
13C2 PFHxA	100		70 - 130								
13C2 PFDA	112		70 - 130								
13C3-GenX	106		70 - 130								

QC Association Summary

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

Job ID: 380-151944-1
SDG: Site J

LCMS

Prep Batch: 154238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-151944-1	BWS2253-J1-AQ	Total/NA	Drinking Water	533	
380-151944-2	BWS2253-J1-FB	Total/NA	Drinking Water	533	
MBL 380-154238/22-A	Method Blank	Total/NA	Water	533	
LCS 380-154238/24-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-154238/23-A	Lab Control Sample	Total/NA	Water	533	
380-152013-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-152013-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Prep Batch: 154245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-151944-1	BWS2253-J1-AQ	Total/NA	Drinking Water	537.1 DW	
380-151944-2	BWS2253-J1-FB	Total/NA	Drinking Water	537.1 DW	
MBL 380-154245/19-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-154245/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-154245/20-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-151645-B-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-151645-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 154283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-151944-2	BWS2253-J1-FB	Total/NA	Drinking Water	533	154238
MBL 380-154238/22-A	Method Blank	Total/NA	Water	533	154238
LCS 380-154238/24-A	Lab Control Sample	Total/NA	Water	533	154238
MRL 380-154238/23-A	Lab Control Sample	Total/NA	Water	533	154238
380-152013-B-1-A MS	Matrix Spike	Total/NA	Water	533	154238
380-152013-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	154238

Analysis Batch: 154292

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-151944-1	BWS2253-J1-AQ	Total/NA	Drinking Water	537.1	154245
380-151944-2	BWS2253-J1-FB	Total/NA	Drinking Water	537.1	154245
MBL 380-154245/19-A	Method Blank	Total/NA	Water	537.1	154245
LCS 380-154245/21-A	Lab Control Sample	Total/NA	Water	537.1	154245
MRL 380-154245/20-A	Lab Control Sample	Total/NA	Water	537.1	154245
380-151645-B-1-A MS	Matrix Spike	Total/NA	Water	537.1	154245
380-151645-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	154245

Analysis Batch: 155218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-151944-1	BWS2253-J1-AQ	Total/NA	Drinking Water	533	154238

Lab Chronicle

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

Job ID: 380-151944-1
SDG: Site J

Client Sample ID: BWS2253-J1-AQ

Date Collected: 05/21/25 12:30

Date Received: 05/22/25 10:06

Lab Sample ID: 380-151944-1

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			154238	E9PK	EA POM	05/23/25 18:54
Total/NA	Analysis	533		1	155218	Y5FM	EA POM	05/30/25 13:28
Total/NA	Prep	537.1 DW			154245	N8NE	EA POM	05/23/25 19:11
Total/NA	Analysis	537.1		1	154292	M7ML	EA POM	05/24/25 17:29

Client Sample ID: BWS2253-J1-FB

Date Collected: 05/21/25 12:30

Date Received: 05/22/25 10:06

Lab Sample ID: 380-151944-2

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			154238	E9PK	EA POM	05/23/25 18:54
Total/NA	Analysis	533		1	154283	M7ML	EA POM	05/24/25 19:04
Total/NA	Prep	537.1 DW			154245	N8NE	EA POM	05/23/25 19:11
Total/NA	Analysis	537.1		1	154292	M7ML	EA POM	05/24/25 17:38

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: 380-151944-1
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
- 2
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Method Summary

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

Job ID: 380-151944-1
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: 380-151944-1
SDG: Site J

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-151944-1	BWS2253-J1-AQ	Drinking Water	05/21/25 12:30	05/22/25 10:06
380-151944-2	BWS2253-J1-FB	Drinking Water	05/21/25 12:30	05/22/25 10:06

- 1
- 2
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- 17

Page: Page 1 of 1
Job #:[illegible]

Ver. 01/16/2019

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-151944-1

SDG Number: Site J

Login Number: 151944

List Source: Eurofins Eaton Analytical Pomona

List Number: 1

Creator: Edrosa, Rey

Question	Answer	Comment
The coolers custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
Samples were received on ice.	True	
Cooler(s) Temperature is acceptable.	True	
Cooler(s) Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and is legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
CIO4 headspace requirement met (>50% for CA, >30% for other states).	N/A	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	