

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

INTERA - Red-Hill-Incident

JOB NUMBER

380-184260-1

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



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Definitions/Glossary

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

Job ID: 380-184260-1

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: 380-184260-1

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Job Narrative 380-184260-1

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 11/22/2025 7:38 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 5.2°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: 380-184260-1

Client Sample ID: BWS2253-H1-AQ

Lab Sample ID: 380-184260-1

☐ No Detections.

Client Sample ID: BWS2253-H1-FB

Lab Sample ID: 380-184260-2

☐ 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: 380-184260-1

Client Sample ID: BWS2253-H1-AQ

Lab Sample ID: 380-184260-1

Date Collected: 11/20/25 10:30

Matrix: Water

Date Received: 11/22/25 07:38

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 09:12	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	103		50 - 200	11/25/25 15:18	11/26/25 09:12	1
13C6 PFDA	100		50 - 200	11/25/25 15:18	11/26/25 09:12	1
13C5 PFHxA	113		50 - 200	11/25/25 15:18	11/26/25 09:12	1
13C4 PFHpA	110		50 - 200	11/25/25 15:18	11/26/25 09:12	1
13C8 PFOA	113		50 - 200	11/25/25 15:18	11/26/25 09:12	1
13C9 PFNA	109		50 - 200	11/25/25 15:18	11/26/25 09:12	1
13C7 PFUnA	96		50 - 200	11/25/25 15:18	11/26/25 09:12	1
13C2 PFDoA	104		50 - 200	11/25/25 15:18	11/26/25 09:12	1
13C4 PFBA	108		50 - 200	11/25/25 15:18	11/26/25 09:12	1
13C5 PFPeA	110		50 - 200	11/25/25 15:18	11/26/25 09:12	1
13C3 PFBS	121		50 - 200	11/25/25 15:18	11/26/25 09:12	1
13C3 PFHxS	124		50 - 200	11/25/25 15:18	11/26/25 09:12	1
13C8 PFOS	120		50 - 200	11/25/25 15:18	11/26/25 09:12	1

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Client Sample Results

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

Job ID: 380-184260-1

Client Sample ID: BWS2253-H1-AQ

Lab Sample ID: 380-184260-1

Date Collected: 11/20/25 10:30

Matrix: Water

Date Received: 11/22/25 07:38

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	153		50 - 200	11/25/25 15:18	11/26/25 09:12	1
13C2-6:2-FTS	144		50 - 200	11/25/25 15:18	11/26/25 09:12	1
13C2-8:2-FTS	125		50 - 200	11/25/25 15:18	11/26/25 09:12	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		11/24/25 17:04	11/25/25 11:20	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:20	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:20	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:20	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:20	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:20	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:20	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:20	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:20	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:20	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:20	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:20	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:20	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:20	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:20	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:20	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	110		70 - 130			11/24/25 17:04	11/25/25 11:20	1
13C2 PFHxA	101		70 - 130			11/24/25 17:04	11/25/25 11:20	1
13C2 PFDA	112		70 - 130			11/24/25 17:04	11/25/25 11:20	1
13C3-GenX	105		70 - 130			11/24/25 17:04	11/25/25 11:20	1

Client Sample ID: BWS2253-H1-FB

Lab Sample ID: 380-184260-2

Date Collected: 11/20/25 10:30

Matrix: Water

Date Received: 11/22/25 07:38

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		11/25/25 15:18	11/26/25 13:19	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1

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Client Sample Results

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

Job ID: 380-184260-1

Client Sample ID: BWS2253-H1-FB

Lab Sample ID: 380-184260-2

Date Collected: 11/20/25 10:30

Matrix: Water

Date Received: 11/22/25 07:38

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		11/25/25 15:18	11/26/25 13:19	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		11/25/25 15:18	11/26/25 13:19	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	88		50 - 200	11/25/25 15:18	11/26/25 13:19	1
13C6 PFDA	97		50 - 200	11/25/25 15:18	11/26/25 13:19	1
13C5 PFHxA	93		50 - 200	11/25/25 15:18	11/26/25 13:19	1
13C4 PFHpA	96		50 - 200	11/25/25 15:18	11/26/25 13:19	1
13C8 PFOA	99		50 - 200	11/25/25 15:18	11/26/25 13:19	1
13C9 PFNA	100		50 - 200	11/25/25 15:18	11/26/25 13:19	1
13C7 PFUnA	96		50 - 200	11/25/25 15:18	11/26/25 13:19	1
13C2 PFDoA	101		50 - 200	11/25/25 15:18	11/26/25 13:19	1
13C4 PFBA	97		50 - 200	11/25/25 15:18	11/26/25 13:19	1
13C5 PFPeA	90		50 - 200	11/25/25 15:18	11/26/25 13:19	1
13C3 PFBS	108		50 - 200	11/25/25 15:18	11/26/25 13:19	1
13C3 PFHxS	107		50 - 200	11/25/25 15:18	11/26/25 13:19	1
13C8 PFOS	111		50 - 200	11/25/25 15:18	11/26/25 13:19	1
13C2-4:2-FTS	114		50 - 200	11/25/25 15:18	11/26/25 13:19	1
13C2-6:2-FTS	112		50 - 200	11/25/25 15:18	11/26/25 13:19	1
13C2-8:2-FTS	114		50 - 200	11/25/25 15:18	11/26/25 13:19	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		11/24/25 17:04	11/25/25 11:29	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:29	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:29	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-184260-1

Client Sample ID: BWS2253-H1-FB

Lab Sample ID: 380-184260-2

Date Collected: 11/20/25 10:30

Matrix: Water

Date Received: 11/22/25 07:38

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		11/24/25 17:04	11/25/25 11:29	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:29	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:29	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:29	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:29	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:29	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:29	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:29	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:29	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:29	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:29	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:29	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:29	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:29	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		11/24/25 17:04	11/25/25 11:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	108		70 - 130			11/24/25 17:04	11/25/25 11:29	1
13C2 PFHxA	105		70 - 130			11/24/25 17:04	11/25/25 11:29	1
13C2 PFDA	108		70 - 130			11/24/25 17:04	11/25/25 11:29	1
13C3-GenX	110		70 - 130			11/24/25 17:04	11/25/25 11:29	1

Action Limit Summary

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

Job ID: 380-184260-1

Client Sample ID: BWS2253-H1-AQ

Lab Sample ID: 380-184260-1

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-H1-FB

Lab Sample ID: 380-184260-2

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: 380-184260-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-184172-B-1-A MS	Matrix Spike	108	109	110	104
380-184172-C-1-A MSD	Matrix Spike Duplicate	110	113	113	105
380-184260-1	BWS2253-H1-AQ	110	101	112	105
380-184260-2	BWS2253-H1-FB	108	105	108	110
LCS 380-188387/22-A	Lab Control Sample	98	102	106	100
MBL 380-188387/20-A	Method Blank	113	107	109	99
MRL 380-188387/21-A	Lab Control Sample	106	99	106	97

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: 380-184260-1

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

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDaA (50-200)
380-184260-1	BWS2253-H1-AQ	103	100	113	110	113	109	96	104
380-184260-1 MS	BWS2253-H1-AQ	88	88	90	92	93	94	91	95
380-184260-1 MSD	BWS2253-H1-AQ	98	98	100	99	101	102	96	105
380-184260-2	BWS2253-H1-FB	88	97	93	96	99	100	96	101
LCS 380-188601/22-A	Lab Control Sample	105	112	107	106	107	112	113	113
MBL 380-188601/20-A	Method Blank	95	109	102	97	101	104	106	110
MRL 380-188601/21-A	Lab Control Sample	95	111	100	104	111	110	107	119

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)
380-184260-1	BWS2253-H1-AQ	108	110	121	124	120	153	144	125
380-184260-1 MS	BWS2253-H1-AQ	98	100	111	109	113	127	127	121
380-184260-1 MSD	BWS2253-H1-AQ	101	107	110	111	112	142	133	122
380-184260-2	BWS2253-H1-FB	97	90	108	107	111	114	112	114
LCS 380-188601/22-A	Lab Control Sample	101	102	105	104	106	112	109	107
MBL 380-188601/20-A	Method Blank	99	92	106	101	106	109	104	106
MRL 380-188601/21-A	Lab Control Sample	94	96	110	107	111	134	129	123

Surrogate Legend

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

QC Sample Results

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

Job ID: 380-184260-1

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

Lab Sample ID: MBL 380-188601/20-A

Matrix: Water

Analysis Batch: 188789

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 188601

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		11/25/25 15:18	11/26/25 11:00	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	95		50 - 200	11/25/25 15:18	11/26/25 11:00	1
13C6 PFDA	109		50 - 200	11/25/25 15:18	11/26/25 11:00	1
13C5 PFHxA	102		50 - 200	11/25/25 15:18	11/26/25 11:00	1
13C4 PFHpA	97		50 - 200	11/25/25 15:18	11/26/25 11:00	1
13C8 PFOA	101		50 - 200	11/25/25 15:18	11/26/25 11:00	1
13C9 PFNA	104		50 - 200	11/25/25 15:18	11/26/25 11:00	1
13C7 PFUnA	106		50 - 200	11/25/25 15:18	11/26/25 11:00	1
13C2 PFDoA	110		50 - 200	11/25/25 15:18	11/26/25 11:00	1
13C4 PFBA	99		50 - 200	11/25/25 15:18	11/26/25 11:00	1
13C5 PFPeA	92		50 - 200	11/25/25 15:18	11/26/25 11:00	1
13C3 PFBS	106		50 - 200	11/25/25 15:18	11/26/25 11:00	1
13C3 PFHxS	101		50 - 200	11/25/25 15:18	11/26/25 11:00	1

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QC Sample Results

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

Job ID: 380-184260-1

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

Lab Sample ID: MBL 380-188601/20-A

Matrix: Water

Analysis Batch: 188789

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 188601

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	106		50 - 200	11/25/25 15:18	11/26/25 11:00	1
13C2-4:2-FTS	109		50 - 200	11/25/25 15:18	11/26/25 11:00	1
13C2-6:2-FTS	104		50 - 200	11/25/25 15:18	11/26/25 11:00	1
13C2-8:2-FTS	106		50 - 200	11/25/25 15:18	11/26/25 11:00	1

Lab Sample ID: LCS 380-188601/22-A

Matrix: Water

Analysis Batch: 188789

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 188601

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		95	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	120	117		ng/L		97	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	124		ng/L		103	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	117		ng/L		97	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	120		ng/L		100	70 - 130
Perfluorodecanoic acid (PFDA)	120	115		ng/L		95	70 - 130
Perfluorododecanoic acid (PFDaA)	120	116		ng/L		96	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	118		ng/L		98	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	113		ng/L		94	70 - 130
Perfluorohexanoic acid (PFHxA)	120	116		ng/L		97	70 - 130
Perfluorononanoic acid (PFNA)	120	116		ng/L		96	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	118		ng/L		98	70 - 130
Perfluorooctanoic acid (PFOA)	120	120		ng/L		99	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	119		ng/L		99	70 - 130
Perfluorobutanoic acid (PFBA)	120	115		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	126		ng/L		105	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	128		ng/L		106	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	128		ng/L		106	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	120		ng/L		100	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	119		ng/L		99	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	119		ng/L		99	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	120		ng/L		100	70 - 130
Perfluoropentanoic acid (PFPeA)	120	120		ng/L		100	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	123		ng/L		102	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-184260-1

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

Lab Sample ID: LCS 380-188601/22-A

Matrix: Water

Analysis Batch: 188789

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 188601

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	120	115		ng/L		96	70 - 130
	LCS	LCS					
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	105		50 - 200				
13C6 PFDA	112		50 - 200				
13C5 PFHxA	107		50 - 200				
13C4 PFHpA	106		50 - 200				
13C8 PFOA	107		50 - 200				
13C9 PFNA	112		50 - 200				
13C7 PFUnA	113		50 - 200				
13C2 PFDoA	113		50 - 200				
13C4 PFBA	101		50 - 200				
13C5 PFPeA	102		50 - 200				
13C3 PFBS	105		50 - 200				
13C3 PFHxS	104		50 - 200				
13C8 PFOS	106		50 - 200				
13C2-4:2-FTS	112		50 - 200				
13C2-6:2-FTS	109		50 - 200				
13C2-8:2-FTS	107		50 - 200				

Lab Sample ID: MRL 380-188601/21-A

Matrix: Water

Analysis Batch: 188789

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 188601

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.81	J	ng/L		90	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.00	1.92	J	ng/L		96	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.09	J	ng/L		104	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.09	J	ng/L		105	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.10	J	ng/L		105	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.04	J	ng/L		102	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	1.98	J	ng/L		99	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.08	J	ng/L		104	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.02	J	ng/L		101	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.16	J	ng/L		108	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.11	J	ng/L		105	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.04	J	ng/L		102	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.14	J	ng/L		107	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	1.85	J	ng/L		92	50 - 150

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QC Sample Results

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

Job ID: 380-184260-1

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

Lab Sample ID: MRL 380-188601/21-A

Matrix: Water

Analysis Batch: 188789

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 188601

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	2.15	J	ng/L		107	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.49	J	ng/L		124	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	2.21	J	ng/L		110	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.13	J	ng/L		106	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	2.02	J	ng/L		101	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	2.03	J	ng/L		101	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	1.95	J	ng/L		97	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits
13C3 HFPO-DA	95		50 - 200
13C6 PFDA	111		50 - 200
13C5 PFHxA	100		50 - 200
13C4 PFHpA	104		50 - 200
13C8 PFOA	111		50 - 200
13C9 PFNA	110		50 - 200
13C7 PFUnA	107		50 - 200
13C2 PFDoA	119		50 - 200
13C4 PFBA	94		50 - 200
13C5 PFPeA	96		50 - 200
13C3 PFBS	110		50 - 200
13C3 PFHxS	107		50 - 200
13C8 PFOS	111		50 - 200
13C2-4:2-FTS	134		50 - 200
13C2-6:2-FTS	129		50 - 200
13C2-8:2-FTS	123		50 - 200

Lab Sample ID: 380-184260-1 MS

Matrix: Water

Analysis Batch: 188789

Client Sample ID: BWS2253-H1-AQ

Prep Type: Total/NA

Prep Batch: 188601

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.2	57.3		ng/L		95	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.2	59.8		ng/L		99	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.2	62.0		ng/L		103	70 - 130

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QC Sample Results

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

Job ID: 380-184260-1

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

Lab Sample ID: 380-184260-1 MS

Matrix: Water

Analysis Batch: 188789

Client Sample ID: BWS2253-H1-AQ

Prep Type: Total/NA

Prep Batch: 188601

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		60.2	61.8		ng/L		103	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.2	59.4		ng/L		99	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		60.2	60.9		ng/L		101	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.2	58.2		ng/L		97	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		60.2	61.7		ng/L		102	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.2	60.4		ng/L		100	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		60.2	60.9		ng/L		101	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.2	58.7		ng/L		97	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.2	61.0		ng/L		101	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		60.2	61.4		ng/L		102	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.2	62.0		ng/L		103	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		60.2	60.2		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.2	63.7		ng/L		106	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.2	68.2		ng/L		113	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.2	63.0		ng/L		105	70 - 130
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		60.2	61.2		ng/L		102	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.2	61.0		ng/L		101	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.2	60.1		ng/L		100	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.2	58.1		ng/L		96	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		60.2	59.5		ng/L		99	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.2	61.5		ng/L		102	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.2	61.4		ng/L		102	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C3 HFPO-DA	88		50 - 200
13C6 PFDA	88		50 - 200
13C5 PFHxA	90		50 - 200
13C4 PFHpA	92		50 - 200
13C8 PFOA	93		50 - 200
13C9 PFNA	94		50 - 200
13C7 PFUnA	91		50 - 200
13C2 PFDoA	95		50 - 200
13C4 PFBA	98		50 - 200
13C5 PFPeA	100		50 - 200
13C3 PFBS	111		50 - 200
13C3 PFHxS	109		50 - 200
13C8 PFOS	113		50 - 200

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QC Sample Results

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

Job ID: 380-184260-1

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

Lab Sample ID: 380-184260-1 MS

Matrix: Water

Analysis Batch: 188789

Client Sample ID: BWS2253-H1-AQ

Prep Type: Total/NA

Prep Batch: 188601

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	127		50 - 200
13C2-6:2-FTS	127		50 - 200
13C2-8:2-FTS	121		50 - 200

Lab Sample ID: 380-184260-1 MSD

Matrix: Water

Analysis Batch: 188789

Client Sample ID: BWS2253-H1-AQ

Prep Type: Total/NA

Prep Batch: 188601

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.2	59.3		ng/L		98	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		60.2	61.0		ng/L		101	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.2	62.6		ng/L		104	70 - 130	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.2	61.7		ng/L		102	70 - 130	0	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.2	62.4		ng/L		104	70 - 130	5	30
Perfluorodecanoic acid (PFDA)	<2.0		60.2	58.4		ng/L		97	70 - 130	4	30
Perfluorododecanoic acid (PFDaA)	<2.0		60.2	56.9		ng/L		94	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.2	63.0		ng/L		105	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.2	59.7		ng/L		99	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<2.0		60.2	62.8		ng/L		104	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		60.2	58.9		ng/L		98	70 - 130	0	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.2	61.4		ng/L		102	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		60.2	61.1		ng/L		101	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.2	62.3		ng/L		103	70 - 130	0	30
Perfluorobutanoic acid (PFBA)	<2.0		60.2	61.8		ng/L		100	70 - 130	3	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.2	66.2		ng/L		110	70 - 130	4	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.2	63.7		ng/L		106	70 - 130	7	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.2	62.0		ng/L		103	70 - 130	2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.2	59.9		ng/L		99	70 - 130	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		60.2	64.5		ng/L		107	70 - 130	6	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.2	60.6		ng/L		101	70 - 130	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.2	59.5		ng/L		99	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)	<2.0		60.2	60.8		ng/L		101	70 - 130	2	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.2	62.1		ng/L		103	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.2	60.3		ng/L		100	70 - 130	2	30

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QC Sample Results

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

Job ID: 380-184260-1

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

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C3 HFPO-DA	98		50 - 200
13C6 PFDA	98		50 - 200
13C5 PFHxA	100		50 - 200
13C4 PFHpA	99		50 - 200
13C8 PFOA	101		50 - 200
13C9 PFNA	102		50 - 200
13C7 PFUnA	96		50 - 200
13C2 PFDoA	105		50 - 200
13C4 PFBA	101		50 - 200
13C5 PFPeA	107		50 - 200
13C3 PFBS	110		50 - 200
13C3 PFHxS	111		50 - 200
13C8 PFOS	112		50 - 200
13C2-4:2-FTS	142		50 - 200
13C2-6:2-FTS	133		50 - 200
13C2-8:2-FTS	122		50 - 200

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

Lab Sample ID: MBL 380-188387/20-A
Matrix: Water
Analysis Batch: 188490

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 188387

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		11/24/25 17:04	11/25/25 07:40	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		11/24/25 17:04	11/25/25 07:40	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		11/24/25 17:04	11/25/25 07:40	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		11/24/25 17:04	11/25/25 07:40	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		11/24/25 17:04	11/25/25 07:40	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		11/24/25 17:04	11/25/25 07:40	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		11/24/25 17:04	11/25/25 07:40	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		11/24/25 17:04	11/25/25 07:40	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		11/24/25 17:04	11/25/25 07:40	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		11/24/25 17:04	11/25/25 07:40	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		11/24/25 17:04	11/25/25 07:40	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		11/24/25 17:04	11/25/25 07:40	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		11/24/25 17:04	11/25/25 07:40	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		11/24/25 17:04	11/25/25 07:40	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		11/24/25 17:04	11/25/25 07:40	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	<0.30		2.0	ng/L		11/24/25 17:04	11/25/25 07:40	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<0.30		2.0	ng/L		11/24/25 17:04	11/25/25 07:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		11/24/25 17:04	11/25/25 07:40	1
Surrogate	MBL %Recovery	MBL Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	113		70 - 130			11/24/25 17:04	11/25/25 07:40	1
13C2 PFHxA	107		70 - 130			11/24/25 17:04	11/25/25 07:40	1
13C2 PFDA	109		70 - 130			11/24/25 17:04	11/25/25 07:40	1

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QC Sample Results

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

Job ID: 380-184260-1

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

Lab Sample ID: MBL 380-188387/20-A
Matrix: Water
Analysis Batch: 188490

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 188387

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-GenX	99		70 - 130	11/24/25 17:04	11/25/25 07:40	1

Lab Sample ID: LCS 380-188387/22-A
Matrix: Water
Analysis Batch: 188490

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 188387

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	50.0	47.9		ng/L		96	70 - 130
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	50.0	49.0		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.0	48.7		ng/L		97	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.0	47.4		ng/L		95	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.0	47.9		ng/L		96	70 - 130
Perfluorohexanoic acid (PFHxA)	50.0	50.6		ng/L		101	70 - 130
Perfluorododecanoic acid (PFDoA)	50.0	49.8		ng/L		100	70 - 130
Perfluorooctanoic acid (PFOA)	50.0	50.3		ng/L		101	70 - 130
Perfluorodecanoic acid (PFDA)	50.0	50.4		ng/L		101	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.0	50.2		ng/L		100	70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.0	52.0		ng/L		104	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.0	50.4		ng/L		101	70 - 130
Perfluorononanoic acid (PFNA)	50.0	51.5		ng/L		103	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.0	52.1		ng/L		104	70 - 130
Perfluorotridecanoic acid (PFTrDA)	50.0	50.9		ng/L		102	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	50.0	50.4		ng/L		101	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	50.0	48.7		ng/L		97	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.0	48.1		ng/L		96	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	98		70 - 130
13C2 PFHxA	102		70 - 130
13C2 PFDA	106		70 - 130
13C3-GenX	100		70 - 130

QC Sample Results

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

Job ID: 380-184260-1

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

Lab Sample ID: MRL 380-188387/21-A

Matrix: Water

Analysis Batch: 188490

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 188387

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.91	J	ng/L		95	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.28	J	ng/L		114	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.11	J	ng/L		106	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.09	J	ng/L		105	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.22	J	ng/L		111	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.01	J	ng/L		100	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.15	J	ng/L		108	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.11	J	ng/L		105	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.17	J	ng/L		108	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.19	J	ng/L		110	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.17	J	ng/L		108	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.18	J	ng/L		109	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.20	J	ng/L		110	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.29	J	ng/L		114	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.16	J	ng/L		108	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.04	J	ng/L		102	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.01	J	ng/L		101	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.05	J	ng/L		102	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	106		70 - 130
13C2 PFHxA	99		70 - 130
13C2 PFDA	106		70 - 130
13C3-GenX	97		70 - 130

Lab Sample ID: 380-184172-B-1-A MS

Matrix: Water

Analysis Batch: 188490

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 188387

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.2	25.2		ng/L		100	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.2	25.4		ng/L		101	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.2	26.4		ng/L		105	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.2	25.2		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: 380-184260-1

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

Lab Sample ID: 380-184172-B-1-A MS

Matrix: Water

Analysis Batch: 188490

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 188387

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits		
	Result	Qualifier	Added	Result	Qualifier				Limits			
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.2	25.5		ng/L		101	70 - 130			
Perfluorohexanoic acid (PFHxA)	<2.0		25.2	27.3		ng/L		109	70 - 130			
Perfluorododecanoic acid (PFDoA)	<2.0		25.2	27.1		ng/L		107	70 - 130			
Perfluorooctanoic acid (PFOA)	<2.0		25.2	27.2		ng/L		108	70 - 130			
Perfluorodecanoic acid (PFDA)	<2.0		25.2	26.4		ng/L		105	70 - 130			
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.2	26.7		ng/L		106	70 - 130			
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.2	26.6		ng/L		106	70 - 130			
Perfluoroheptanoic acid (PFHpA)	<2.0		25.2	26.6		ng/L		105	70 - 130			
Perfluorononanoic acid (PFNA)	<2.0		25.2	27.6		ng/L		110	70 - 130			
Perfluorotetradecanoic acid (PFTA)	<2.0		25.2	27.1		ng/L		108	70 - 130			
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.2	27.7		ng/L		110	70 - 130			
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.2	26.2		ng/L		104	70 - 130			
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.2	25.2		ng/L		100	70 - 130			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.2	26.7		ng/L		106	70 - 130			
		MS	MS									
Surrogate	%Recovery	Qualifier	Limits									
d5-NEtFOSAA	108		70 - 130									
13C2 PFHxA	109		70 - 130									
13C2 PFDA	110		70 - 130									
13C3-GenX	104		70 - 130									

Lab Sample ID: 380-184172-C-1-A MSD

Matrix: Water

Analysis Batch: 188490

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 188387

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	25.0		ng/L		100	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	26.9		ng/L		107	70 - 130	6	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	27.4		ng/L		109	70 - 130	4	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	26.0		ng/L		104	70 - 130	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	26.9		ng/L		108	70 - 130	5	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	27.8		ng/L		111	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	28.1		ng/L		112	70 - 130	4	30
Perfluorooctanoic acid (PFOA)	<2.0		25.1	27.0		ng/L		108	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		25.1	26.5		ng/L		106	70 - 130	0	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-184260-1

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

Lab Sample ID: 380-184172-C-1-A MSD

Matrix: Water

Analysis Batch: 188490

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 188387

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	<2.0		25.1	27.7		ng/L		111	70 - 130	4	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	27.1		ng/L		108	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	26.9		ng/L		108	70 - 130	1	30
Perfluorononanoic acid (PFNA)	<2.0		25.1	28.0		ng/L		112	70 - 130	1	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	28.0		ng/L		112	70 - 130	3	30
Perfluorotridecanoic acid (PFTTrDA)	<2.0		25.1	28.9		ng/L		115	70 - 130	4	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	27.2		ng/L		108	70 - 130	4	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	26.6		ng/L		106	70 - 130	5	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	26.4		ng/L		106	70 - 130	1	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
d5-NEtFOSAA	110		70 - 130
13C2 PFHxA	113		70 - 130
13C2 PFDA	113		70 - 130
13C3-GenX	105		70 - 130

QC Association Summary

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

Job ID: 380-184260-1

LCMS

Prep Batch: 188387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-184260-1	BWS2253-H1-AQ	Total/NA	Water	537.1 DW	
380-184260-2	BWS2253-H1-FB	Total/NA	Water	537.1 DW	
MBL 380-188387/20-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-188387/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-188387/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-184172-B-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-184172-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 188490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-184260-1	BWS2253-H1-AQ	Total/NA	Water	537.1	188387
380-184260-2	BWS2253-H1-FB	Total/NA	Water	537.1	188387
MBL 380-188387/20-A	Method Blank	Total/NA	Water	537.1	188387
LCS 380-188387/22-A	Lab Control Sample	Total/NA	Water	537.1	188387
MRL 380-188387/21-A	Lab Control Sample	Total/NA	Water	537.1	188387
380-184172-B-1-A MS	Matrix Spike	Total/NA	Water	537.1	188387
380-184172-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	188387

Prep Batch: 188601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-184260-1	BWS2253-H1-AQ	Total/NA	Water	533	
380-184260-2	BWS2253-H1-FB	Total/NA	Water	533	
MBL 380-188601/20-A	Method Blank	Total/NA	Water	533	
LCS 380-188601/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-188601/21-A	Lab Control Sample	Total/NA	Water	533	
380-184260-1 MS	BWS2253-H1-AQ	Total/NA	Water	533	
380-184260-1 MSD	BWS2253-H1-AQ	Total/NA	Water	533	

Analysis Batch: 188789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-184260-1	BWS2253-H1-AQ	Total/NA	Water	533	188601
380-184260-2	BWS2253-H1-FB	Total/NA	Water	533	188601
MBL 380-188601/20-A	Method Blank	Total/NA	Water	533	188601
LCS 380-188601/22-A	Lab Control Sample	Total/NA	Water	533	188601
MRL 380-188601/21-A	Lab Control Sample	Total/NA	Water	533	188601
380-184260-1 MS	BWS2253-H1-AQ	Total/NA	Water	533	188601
380-184260-1 MSD	BWS2253-H1-AQ	Total/NA	Water	533	188601

Lab Chronicle

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

Job ID: 380-184260-1

Client Sample ID: BWS2253-H1-AQ

Lab Sample ID: 380-184260-1

Date Collected: 11/20/25 10:30

Matrix: Water

Date Received: 11/22/25 07:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			188601	N8NE	EA POM	11/25/25 15:18
Total/NA	Analysis	533		1	188789	SZ9R	EA POM	11/26/25 09:12
Total/NA	Prep	537.1 DW			188387	N8NE	EA POM	11/24/25 17:04
Total/NA	Analysis	537.1		1	188490	SZ9R	EA POM	11/25/25 11:20

Client Sample ID: BWS2253-H1-FB

Lab Sample ID: 380-184260-2

Date Collected: 11/20/25 10:30

Matrix: Water

Date Received: 11/22/25 07:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			188601	N8NE	EA POM	11/25/25 15:18
Total/NA	Analysis	533		1	188789	SZ9R	EA POM	11/26/25 13:19
Total/NA	Prep	537.1 DW			188387	N8NE	EA POM	11/24/25 17:04
Total/NA	Analysis	537.1		1	188490	SZ9R	EA POM	11/25/25 11:29

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: 380-184260-1

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
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

Method Summary

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

Job ID: 380-184260-1

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

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

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

Sample Summary

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

Job ID: 380-184260-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-184260-1	BWS2253-H1-AQ	Water	11/20/25 10:30	11/22/25 07:38	Hawaii
380-184260-2	BWS2253-H1-FB	Water	11/20/25 10:30	11/22/25 07:38	Hawaii

Chain of Custody Record

Client Information		Sampler: E. Kakone/H. Bentley		Lab PM: Lopez, Maria	Carrier Tracking No(s):	COC No:
Client Contact: Mr Erwin Kawata		Phone: 858-205-0730		E-Mail: Maria.Lopez@eurofins.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: City & County of Honolulu		Address: 630 South Beretania Street		City: Honolulu		Job #:
State, Zip: HI 96843		Phone: 808-748-5066		Email: ekawata@hawaii.gov		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHCO ₃ F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - As ₂ O ₃ P - Na ₂ O ₂ Q - Na ₂ SO ₃ R - Na ₂ SO ₄ S - H ₂ SO ₄ T - 10% Dodecylsulfate U - Acetone V - Me ₂ SO W - H ₂ AS X - Toluene Y - Toluene Z - other (specify)
Due Date Requested:		TAT Requested (days): Standard		Compliance Project: Δ Yes Δ No		
PO #:		WG #:		Project #:		
SSOW #:		Project Name: HRS-340E - RED-HILL - INTERA		Site: H1		
Sample Identification		Sample Date	Sample Time	Sample Type (C-Comp, G-grab)	Matrix (W-water, S-solid, O-organic, D-digestion, A-AM)	Special Instructions/Note: x = testing comes from another container.
BWS2253-H1-AQ		11/20/25	1030	G	Water	
BWS2253-H1-FB		11/20/25	1030	G	Water	
BWS2253-H1-FB		11/20/25	1030	G	Water	
Possible Hazard Identification		☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown ☐ Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months		
Deliverable Requested: I II III IV Other (specify)		Special Instructions/QC Requirements:				
Empty Kit Relinquished by: Erwin Kawata		Date/Time: 11/20/25 1300	Date:	Method of Shipment: FEDEX Priority Overnight		
Relinquished by: Erwin Kawata		Date/Time: 11/21/25 0738	Date/Time: 11/21/25 0738	Company: EEA		
Relinquished by:		Date/Time:	Date/Time:	Company:		
Relinquished by:		Date/Time:	Date/Time:	Company:		
Custody Seals Intact: Δ Yes Δ No		Custody Seal No. 630A 5.2 + 0.2 = 5.2 ICE		Cooler Temperature: 5.2 + 0.2 = 5.2 ICE		



380-184260 COC

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-184260-1

Login Number: 184260

List Source: Eurofins Eaton Analytical Pomona

List Number: 1

Creator: Barragan, Cindy

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).	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	