

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

INTERA - Red-Hill-Incident
Site J1 PFAS 533/537.1

JOB NUMBER

380-238380-1

Eurofins 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 Drinking Water and Wastewater West, 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: 380-238380-1
SDG: Site J1 PFAS 533/537.1

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: 380-238380-1

Job ID: 380-238380-1

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Job Narrative 380-238380-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 9/25/2026 10:00 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 2.8°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: 380-238380-1
SDG: Site J1 PFAS 533/537.1

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-238380-1

No Detections.

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-238380-2

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: 380-238380-1
SDG: Site J1 PFAS 533/537.1

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-238380-1

Date Collected: 09/24/26 12:15

Matrix: Drinking Water

Date Received: 09/25/26 10:00

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		09/28/26 07:24	09/28/26 19:54	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/28/26 07:24	09/28/26 19:54	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	111		50 - 200	09/28/26 07:24	09/28/26 19:54	1
13C6 PFDA	112		50 - 200	09/28/26 07:24	09/28/26 19:54	1
13C5 PFHxA	113		50 - 200	09/28/26 07:24	09/28/26 19:54	1
13C4 PFHpA	112		50 - 200	09/28/26 07:24	09/28/26 19:54	1
13C8 PFOA	114		50 - 200	09/28/26 07:24	09/28/26 19:54	1
13C9 PFNA	115		50 - 200	09/28/26 07:24	09/28/26 19:54	1
13C7 PFUnA	117		50 - 200	09/28/26 07:24	09/28/26 19:54	1
13C2 PFDoA	119		50 - 200	09/28/26 07:24	09/28/26 19:54	1
13C4 PFBA	116		50 - 200	09/28/26 07:24	09/28/26 19:54	1
13C5 PFPeA	108		50 - 200	09/28/26 07:24	09/28/26 19:54	1
13C3 PFBS	109		50 - 200	09/28/26 07:24	09/28/26 19:54	1
13C3 PFHxS	110		50 - 200	09/28/26 07:24	09/28/26 19:54	1
13C8 PFOS	112		50 - 200	09/28/26 07:24	09/28/26 19:54	1

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Client Sample Results

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-238380-1

Date Collected: 09/24/26 12:15

Matrix: Drinking Water

Date Received: 09/25/26 10:00

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	113		50 - 200	09/28/26 07:24	09/28/26 19:54	1
13C2-6:2-FTS	100		50 - 200	09/28/26 07:24	09/28/26 19:54	1
13C2-8:2-FTS	108		50 - 200	09/28/26 07:24	09/28/26 19:54	1

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 15:46	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 15:46	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 15:46	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 15:46	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 15:46	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 15:46	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 15:46	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 15:46	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 15:46	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 15:46	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 15:46	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 15:46	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 15:46	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 15:46	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 15:46	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 15:46	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 15:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 15:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	112		70 - 130			09/28/26 02:31	09/28/26 15:46	1
13C2 PFHxA	115		70 - 130			09/28/26 02:31	09/28/26 15:46	1
13C2 PFDA	118		70 - 130			09/28/26 02:31	09/28/26 15:46	1
13C3-GenX	115		70 - 130			09/28/26 02:31	09/28/26 15:46	1

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-238380-2

Date Collected: 09/24/26 12:15

Matrix: Water

Date Received: 09/25/26 10:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1

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Client Sample Results

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-238380-2

Date Collected: 09/24/26 12:15

Matrix: Water

Date Received: 09/25/26 10:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/29/26 07:47	09/29/26 18:19	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	112		50 - 200	09/29/26 07:47	09/29/26 18:19	1
13C6 PFDA	124		50 - 200	09/29/26 07:47	09/29/26 18:19	1
13C5 PFHxA	114		50 - 200	09/29/26 07:47	09/29/26 18:19	1
13C4 PFHpA	113		50 - 200	09/29/26 07:47	09/29/26 18:19	1
13C8 PFOA	112		50 - 200	09/29/26 07:47	09/29/26 18:19	1
13C9 PFNA	121		50 - 200	09/29/26 07:47	09/29/26 18:19	1
13C7 PFUnA	125		50 - 200	09/29/26 07:47	09/29/26 18:19	1
13C2 PFDoA	118		50 - 200	09/29/26 07:47	09/29/26 18:19	1
13C4 PFBA	109		50 - 200	09/29/26 07:47	09/29/26 18:19	1
13C5 PFPeA	109		50 - 200	09/29/26 07:47	09/29/26 18:19	1
13C3 PFBS	97		50 - 200	09/29/26 07:47	09/29/26 18:19	1
13C3 PFHxS	104		50 - 200	09/29/26 07:47	09/29/26 18:19	1
13C8 PFOS	108		50 - 200	09/29/26 07:47	09/29/26 18:19	1
13C2-4:2-FTS	86		50 - 200	09/29/26 07:47	09/29/26 18:19	1
13C2-6:2-FTS	80		50 - 200	09/29/26 07:47	09/29/26 18:19	1
13C2-8:2-FTS	108		50 - 200	09/29/26 07:47	09/29/26 18:19	1

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 18:10	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 18:10	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 18:10	1

Eurofins Pomona

Client Sample Results

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-238380-2

Date Collected: 09/24/26 12:15

Matrix: Water

Date Received: 09/25/26 10:00

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 18:10	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 18:10	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 18:10	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 18:10	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 18:10	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 18:10	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 18:10	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 18:10	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 18:10	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 18:10	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 18:10	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 18:10	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 18:10	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 18:10	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/28/26 02:31	09/28/26 18:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	110		70 - 130			09/28/26 02:31	09/28/26 18:10	1
13C2 PFHxA	112		70 - 130			09/28/26 02:31	09/28/26 18:10	1
13C2 PFDA	111		70 - 130			09/28/26 02:31	09/28/26 18:10	1
13C3-GenX	109		70 - 130			09/28/26 02:31	09/28/26 18:10	1

Action Limit Summary

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-238380-1

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	RL	Method	Prep Type
				Limit			
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	EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-238380-2

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	RL	Method	Prep Type
				Limit			
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	EPA 537.1 V2	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA

Surrogate Summary

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

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)
380-238380-1	BWS2253-J1-AQ	112	115	118	115
380-238380-1 MS	BWS2253-J1-AQ	110	114	114	116
380-238380-1 MSD	BWS2253-J1-AQ	106	111	113	111

Surrogate Legend

d5NEFOS = d5-NEtFOSAA

PFHxA = 13C2 PFHxA

PFDA = 13C2 PFDA

GenX = 13C3-GenX

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

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)
380-238380-2	BWS2253-J1-FB	110	112	111	109
LCS 380-255135/22-A	Lab Control Sample	108	110	111	110
MBL 380-255135/20-A	Method Blank	107	112	114	104
MRL 380-255135/21-A	Lab Control Sample	105	105	108	101

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: 380-238380-1
SDG: Site J1 PFAS 533/537.1

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDaA (50-200)
380-238380-1	BWS2253-J1-AQ	111	112	113	112	114	115	117	119

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-238380-1	BWS2253-J1-AQ	116	108	109	110	112	113	100	108

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

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDaA (50-200)

380-238380-2	BWS2253-J1-FB	112	124	114	113	112	121	125	118
380-238398-B-1-A MS	Matrix Spike	122	119	121	121	115	117	120	125
380-238398-C-1-A MSD	Matrix Spike Duplicate	119	113	121	116	111	112	119	121
380-238525-A-1-B MS	Matrix Spike	114	124	112	113	112	119	126	117
380-238525-A-1-C MSD	Matrix Spike Duplicate	119	123	119	121	111	119	123	118
LCS 380-255137/21-A	Lab Control Sample	122	117	118	118	117	116	121	127
LCS 380-255265/20-A	Lab Control Sample	116	121	116	117	112	118	127	125
MBL 380-255137/19-A	Method Blank	99	107	104	110	107	105	111	117
MBL 380-255265/18-A	Method Blank	111	119	111	113	112	114	117	115
MRL 380-255137/20-A	Lab Control Sample	113	114	116	116	116	118	114	120
MRL 380-255265/19-A	Lab Control Sample	109	117	108	111	106	113	117	117

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-238380-2	BWS2253-J1-FB	109	109	97	104	108	86	80	108
380-238398-B-1-A MS	Matrix Spike	115	117	116	115	112	122	108	112
380-238398-C-1-A MSD	Matrix Spike Duplicate	110	111	113	109	107	113	99	105
380-238525-A-1-B MS	Matrix Spike	112	109	108	108	108	92	85	110
380-238525-A-1-C MSD	Matrix Spike Duplicate	114	111	106	108	110	91	86	103
LCS 380-255137/21-A	Lab Control Sample	118	119	115	116	114	111	102	103

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Isotope Dilution Summary

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
LCS 380-255265/20-A	Lab Control Sample	114	115	111	109	118	94	89	109
MBL 380-255137/19-A	Method Blank	107	110	102	108	102	102	93	102
MBL 380-255265/18-A	Method Blank	111	116	106	111	115	88	89	108
MRL 380-255137/20-A	Lab Control Sample	115	115	112	117	115	109	100	104
MRL 380-255265/19-A	Lab Control Sample	112	114	103	111	109	86	79	104

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: 380-238380-1
SDG: Site J1 PFAS 533/537.1

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

Lab Sample ID: MBL 380-255137/19-A
Matrix: Water
Analysis Batch: 255220

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 255137

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<0.29		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	<0.30		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.59		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<0.98		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
Perfluorobutanesulfonic acid (PFBS)	<0.36		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
Perfluorododecanoic acid (PFDoA)	<0.53		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
Perfluoroheptanoic acid (PFHpA)	<0.38		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
Perfluorohexanesulfonic acid (PFHxS)	<0.31		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
Perfluorohexanoic acid (PFHxA)	<0.45		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
Perfluorononanoic acid (PFNA)	<0.39		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
Perfluorooctanesulfonic acid (PFOS)	<0.42		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
Perfluorooctanoic acid (PFOA)	<0.37		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
Perfluoroundecanoic acid (PFUnA)	<0.41		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
Perfluorobutanoic acid (PFBA)	<0.68		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.36		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.47		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.46		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.24		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.45		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
Perfluoropentanoic acid (PFPeA)	<0.37		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.35		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1
Perfluoropentanesulfonic acid (PFPeS)	<0.38		2.0	ng/L		09/28/26 07:24	09/28/26 17:40	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	99		50 - 200	09/28/26 07:24	09/28/26 17:40	1
13C6 PFDA	107		50 - 200	09/28/26 07:24	09/28/26 17:40	1
13C5 PFHxA	104		50 - 200	09/28/26 07:24	09/28/26 17:40	1
13C4 PFHpA	110		50 - 200	09/28/26 07:24	09/28/26 17:40	1
13C8 PFOA	107		50 - 200	09/28/26 07:24	09/28/26 17:40	1
13C9 PFNA	105		50 - 200	09/28/26 07:24	09/28/26 17:40	1
13C7 PFUnA	111		50 - 200	09/28/26 07:24	09/28/26 17:40	1
13C2 PFDoA	117		50 - 200	09/28/26 07:24	09/28/26 17:40	1
13C4 PFBA	107		50 - 200	09/28/26 07:24	09/28/26 17:40	1
13C5 PFPeA	110		50 - 200	09/28/26 07:24	09/28/26 17:40	1
13C3 PFBS	102		50 - 200	09/28/26 07:24	09/28/26 17:40	1
13C3 PFHxS	108		50 - 200	09/28/26 07:24	09/28/26 17:40	1

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QC Sample Results

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

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

Lab Sample ID: MBL 380-255137/19-A

Matrix: Water

Analysis Batch: 255220

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 255137

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	102		50 - 200	09/28/26 07:24	09/28/26 17:40	1
13C2-4:2-FTS	102		50 - 200	09/28/26 07:24	09/28/26 17:40	1
13C2-6:2-FTS	93		50 - 200	09/28/26 07:24	09/28/26 17:40	1
13C2-8:2-FTS	102		50 - 200	09/28/26 07:24	09/28/26 17:40	1

Lab Sample ID: LCS 380-255137/21-A

Matrix: Water

Analysis Batch: 255220

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 255137

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	118	95.6		ng/L		81	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	118	106		ng/L		90	70 - 130
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	118	101		ng/L		85	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	118	106		ng/L		90	70 - 130
Perfluorobutanesulfonic acid (PFBS)	118	105		ng/L		89	70 - 130
Perfluorodecanoic acid (PFDA)	118	105		ng/L		89	70 - 130
Perfluorododecanoic acid (PFDoA)	118	104		ng/L		88	70 - 130
Perfluoroheptanoic acid (PFHpA)	118	103		ng/L		87	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	118	103		ng/L		88	70 - 130
Perfluorohexanoic acid (PFHxA)	118	110		ng/L		93	70 - 130
Perfluorononanoic acid (PFNA)	118	104		ng/L		88	70 - 130
Perfluorooctanesulfonic acid (PFOS)	118	103		ng/L		87	70 - 130
Perfluorooctanoic acid (PFOA)	118	103		ng/L		87	70 - 130
Perfluoroundecanoic acid (PFUnA)	118	103		ng/L		87	70 - 130
Perfluorobutanoic acid (PFBA)	118	106		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	118	106		ng/L		90	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	118	105		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	118	101		ng/L		86	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	118	99.9		ng/L		85	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	118	99.1		ng/L		84	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	118	96.6		ng/L		82	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	118	104		ng/L		88	70 - 130
Perfluoropentanoic acid (PFPeA)	118	104		ng/L		88	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	118	102		ng/L		86	70 - 130

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QC Sample Results

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

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

Lab Sample ID: LCS 380-255137/21-A

Matrix: Water

Analysis Batch: 255220

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 255137

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	118	99.5		ng/L		84	70 - 130
	LCS	LCS					
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	122		50 - 200				
13C6 PFDA	117		50 - 200				
13C5 PFHxA	118		50 - 200				
13C4 PFHpA	118		50 - 200				
13C8 PFOA	117		50 - 200				
13C9 PFNA	116		50 - 200				
13C7 PFUnA	121		50 - 200				
13C2 PFDoA	127		50 - 200				
13C4 PFBA	118		50 - 200				
13C5 PFPeA	119		50 - 200				
13C3 PFBS	115		50 - 200				
13C3 PFHxS	116		50 - 200				
13C8 PFOS	114		50 - 200				
13C2-4:2-FTS	111		50 - 200				
13C2-6:2-FTS	102		50 - 200				
13C2-8:2-FTS	103		50 - 200				

Lab Sample ID: MRL 380-255137/20-A

Matrix: Water

Analysis Batch: 255220

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 255137

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.97	1.86	J	ng/L		94	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	1.97	1.94	J	ng/L		98	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.97	1.89	J	ng/L		96	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.97	1.90	J	ng/L		97	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.97	2.00	J	ng/L		101	50 - 150
Perfluorodecanoic acid (PFDA)	1.97	1.98	J	ng/L		100	50 - 150
Perfluorododecanoic acid (PFDoA)	1.97	1.95	J	ng/L		99	50 - 150
Perfluoroheptanoic acid (PFHpA)	1.97	2.00	J	ng/L		101	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.97	1.92	J	ng/L		97	50 - 150
Perfluorohexanoic acid (PFHxA)	1.97	2.00	J	ng/L		102	50 - 150
Perfluorononanoic acid (PFNA)	1.97	1.88	J	ng/L		95	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.97	1.93	J	ng/L		98	50 - 150
Perfluorooctanoic acid (PFOA)	1.97	1.98	J	ng/L		101	50 - 150
Perfluoroundecanoic acid (PFUnA)	1.97	2.04	J	ng/L		104	50 - 150
Perfluorobutanoic acid (PFBA)	1.97	2.03	J	ng/L		103	50 - 150

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QC Sample Results

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

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

Lab Sample ID: MRL 380-255137/20-A

Matrix: Water

Analysis Batch: 255220

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 255137

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.97	2.06	J	ng/L		104	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.97	1.94	J	ng/L		99	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.97	1.82	J	ng/L		93	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1.97	2.15	J	ng/L		109	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	1.97	1.92	J	ng/L		98	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	1.97	1.77	J	ng/L		90	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	1.97	2.00	J	ng/L		102	50 - 150
Perfluoropentanoic acid (PFPeA)	1.97	1.91	J	ng/L		97	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	1.97	1.85	J	ng/L		94	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	1.97	1.82	J	ng/L		92	50 - 150

Isotope Dilution	%Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	113		50 - 200
13C6 PFDA	114		50 - 200
13C5 PFHxA	116		50 - 200
13C4 PFHpA	116		50 - 200
13C8 PFOA	116		50 - 200
13C9 PFNA	118		50 - 200
13C7 PFUnA	114		50 - 200
13C2 PFDoA	120		50 - 200
13C4 PFBA	115		50 - 200
13C5 PFPeA	115		50 - 200
13C3 PFBS	112		50 - 200
13C3 PFHxS	117		50 - 200
13C8 PFOS	115		50 - 200
13C2-4:2-FTS	109		50 - 200
13C2-6:2-FTS	100		50 - 200
13C2-8:2-FTS	104		50 - 200

Lab Sample ID: 380-238398-B-1-A MS

Matrix: Water

Analysis Batch: 255220

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 255137

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		118	102		ng/L		86	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		118	109		ng/L		92	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		118	108		ng/L		91	70 - 130

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QC Sample Results

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

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

Lab Sample ID: 380-238398-B-1-A MS

Matrix: Water

Analysis Batch: 255220

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 255137

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		118	108		ng/L		91	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		118	110		ng/L		93	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		118	106		ng/L		89	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		118	106		ng/L		90	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		118	103		ng/L		87	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		118	106		ng/L		89	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		118	112		ng/L		94	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		118	106		ng/L		89	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		118	108		ng/L		91	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		118	110		ng/L		93	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		118	110		ng/L		93	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		118	108		ng/L		91	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		118	106		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		118	107		ng/L		90	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		118	106		ng/L		89	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		118	109		ng/L		92	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		118	102		ng/L		86	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		118	100		ng/L		84	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		118	106		ng/L		89	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		118	105		ng/L		88	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		118	108		ng/L		91	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		118	105		ng/L		89	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	MS Limits
13C3 HFPO-DA	122		50 - 200
13C6 PFDA	119		50 - 200
13C5 PFHxA	121		50 - 200
13C4 PFHpA	121		50 - 200
13C8 PFOA	115		50 - 200
13C9 PFNA	117		50 - 200
13C7 PFUnA	120		50 - 200
13C2 PFDoA	125		50 - 200
13C4 PFBA	115		50 - 200
13C5 PFPeA	117		50 - 200
13C3 PFBS	116		50 - 200
13C3 PFHxS	115		50 - 200
13C8 PFOS	112		50 - 200

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QC Sample Results

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

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

Lab Sample ID: 380-238398-B-1-A MS

Matrix: Water

Analysis Batch: 255220

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 255137

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	122		50 - 200
13C2-6:2-FTS	108		50 - 200
13C2-8:2-FTS	112		50 - 200

Lab Sample ID: 380-238398-C-1-A MSD

Matrix: Water

Analysis Batch: 255220

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 255137

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		118	102		ng/L		86	70 - 130	0	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		118	112		ng/L		95	70 - 130	4	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		118	110		ng/L		93	70 - 130	2	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		118	108		ng/L		91	70 - 130	0	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		118	112		ng/L		95	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		118	112		ng/L		94	70 - 130	5	30
Perfluorododecanoic acid (PFDoA)	<2.0		118	109		ng/L		92	70 - 130	3	30
Perfluorooheptanoic acid (PFHpA)	<2.0		118	105		ng/L		88	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		118	110		ng/L		93	70 - 130	4	30
Perfluorohexanoic acid (PFHxA)	<2.0		118	105		ng/L		89	70 - 130	6	30
Perfluorononanoic acid (PFNA)	<2.0		118	111		ng/L		94	70 - 130	5	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		118	113		ng/L		95	70 - 130	4	30
Perfluorooctanoic acid (PFOA)	<2.0		118	111		ng/L		93	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		118	109		ng/L		92	70 - 130	1	30
Perfluorobutanoic acid (PFBA)	<2.0		118	111		ng/L		94	70 - 130	3	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		118	112		ng/L		95	70 - 130	6	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		118	111		ng/L		93	70 - 130	4	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		118	114		ng/L		96	70 - 130	7	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		118	99.3		ng/L		84	70 - 130	9	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		118	108		ng/L		91	70 - 130	6	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		118	105		ng/L		89	70 - 130	5	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		118	106		ng/L		89	70 - 130	0	30
Perfluoropentanoic acid (PFPeA)	<2.0		118	106		ng/L		89	70 - 130	1	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		118	110		ng/L		93	70 - 130	2	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		118	107		ng/L		90	70 - 130	2	30

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QC Sample Results

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

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

Isotope Dilution	MSD MSD		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	119		50 - 200
13C6 PFDA	113		50 - 200
13C5 PFHxA	121		50 - 200
13C4 PFHpA	116		50 - 200
13C8 PFOA	111		50 - 200
13C9 PFNA	112		50 - 200
13C7 PFUnA	119		50 - 200
13C2 PFDoA	121		50 - 200
13C4 PFBA	110		50 - 200
13C5 PFPeA	111		50 - 200
13C3 PFBS	113		50 - 200
13C3 PFHxS	109		50 - 200
13C8 PFOS	107		50 - 200
13C2-4:2-FTS	113		50 - 200
13C2-6:2-FTS	99		50 - 200
13C2-8:2-FTS	105		50 - 200

Lab Sample ID: MBL 380-255265/18-A

Matrix: Water

Analysis Batch: 255371

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 255265

Analyte	MBL MBL		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
11-Chloroeicosafluoro-3-oxaundecan	<0.29		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
e-1-sulfonic acid (11CI-PF3OUdS)								
9-Chlorohexadecafluoro-3-oxanonan	<0.30		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
e-1-sulfonic acid(9CI-PF3ONS)								
4,8-Dioxa-3H-perfluorononanoic acid	<0.59		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
(ADONA)								
Hexafluoropropylene Oxide Dimer	<0.99		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
Acid (HFPO-DA/GenX)								
Perfluorobutanesulfonic acid (PFBS)	<0.36		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
Perfluorododecanoic acid (PFDoA)	<0.53		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
Perfluoroheptanoic acid (PFHpA)	<0.38		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
Perfluorohexanoic acid (PFHxA)	<0.45		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
Perfluorononanoic acid (PFNA)	<0.39		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
Perfluorooctanesulfonic acid (PFOS)	<0.42		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
Perfluorooctanoic acid (PFOA)	<0.37		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
Perfluoroundecanoic acid (PFUnA)	<0.41		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
Perfluorobutanoic acid (PFBA)	<0.68		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
1H,1H,2H,2H-Perfluorodecane	<0.38		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
sulfonic acid (8:2 FTS)								
1H,1H,2H,2H-Perfluorohexane	<0.36		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
sulfonic acid (4:2 FTS)								
1H,1H,2H,2H-Perfluorooctane sulfonic	<0.47		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
acid (6:2 FTS)								
Nonafluoro-3,6-dioxaheptanoic acid	<0.46		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
(NFDHA)								
Perfluoro (2-ethoxyethane) sulfonic	<0.24		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
acid (PFEESA)								
Perfluoro-3-methoxypropanoic acid	<0.45		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
(PFMPA)								
Perfluoro-4-methoxybutanoic acid	<0.15		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
(PFMBA)								

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QC Sample Results

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

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

Lab Sample ID: MBL 380-255265/18-A

Matrix: Water

Analysis Batch: 255371

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 255265

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	<0.37		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.35		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
Perfluoropentanesulfonic acid (PFPeS)	<0.38		2.0	ng/L		09/29/26 07:47	09/29/26 16:55	1
Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	111		50 - 200			09/29/26 07:47	09/29/26 16:55	1
13C6 PFDA	119		50 - 200			09/29/26 07:47	09/29/26 16:55	1
13C5 PFHxA	111		50 - 200			09/29/26 07:47	09/29/26 16:55	1
13C4 PFHpA	113		50 - 200			09/29/26 07:47	09/29/26 16:55	1
13C8 PFOA	112		50 - 200			09/29/26 07:47	09/29/26 16:55	1
13C9 PFNA	114		50 - 200			09/29/26 07:47	09/29/26 16:55	1
13C7 PFUnA	117		50 - 200			09/29/26 07:47	09/29/26 16:55	1
13C2 PFDoA	115		50 - 200			09/29/26 07:47	09/29/26 16:55	1
13C4 PFBA	111		50 - 200			09/29/26 07:47	09/29/26 16:55	1
13C5 PFPeA	116		50 - 200			09/29/26 07:47	09/29/26 16:55	1
13C3 PFBS	106		50 - 200			09/29/26 07:47	09/29/26 16:55	1
13C3 PFHxS	111		50 - 200			09/29/26 07:47	09/29/26 16:55	1
13C8 PFOS	115		50 - 200			09/29/26 07:47	09/29/26 16:55	1
13C2-4:2-FTS	88		50 - 200			09/29/26 07:47	09/29/26 16:55	1
13C2-6:2-FTS	89		50 - 200			09/29/26 07:47	09/29/26 16:55	1
13C2-8:2-FTS	108		50 - 200			09/29/26 07:47	09/29/26 16:55	1

Lab Sample ID: LCS 380-255265/20-A

Matrix: Water

Analysis Batch: 255371

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 255265

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	118	101		ng/L		86	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	118	102		ng/L		86	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	118	108		ng/L		91	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	118	102		ng/L		86	70 - 130
Perfluorobutanesulfonic acid (PFBS)	118	104		ng/L		88	70 - 130
Perfluorodecanoic acid (PFDA)	118	103		ng/L		87	70 - 130
Perfluorododecanoic acid (PFDoA)	118	102		ng/L		86	70 - 130
Perfluoroheptanoic acid (PFHpA)	118	104		ng/L		88	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	118	102		ng/L		87	70 - 130
Perfluorohexanoic acid (PFHxA)	118	101		ng/L		85	70 - 130
Perfluorononanoic acid (PFNA)	118	99.7		ng/L		84	70 - 130
Perfluorooctanesulfonic acid (PFOS)	118	101		ng/L		85	70 - 130
Perfluorooctanoic acid (PFOA)	118	105		ng/L		89	70 - 130

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QC Sample Results

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

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

Lab Sample ID: LCS 380-255265/20-A

Matrix: Water

Analysis Batch: 255371

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 255265

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	118	101		ng/L		85	70 - 130
Perfluorobutanoic acid (PFBA)	118	104		ng/L		88	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	118	102		ng/L		86	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	118	102		ng/L		86	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	118	102		ng/L		87	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	118	103		ng/L		88	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	118	104		ng/L		88	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	118	104		ng/L		88	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	118	101		ng/L		86	70 - 130
Perfluoropentanoic acid (PFPeA)	118	101		ng/L		86	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	118	96.0		ng/L		81	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	118	98.3		ng/L		83	70 - 130

Isotope Dilution	LCS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	116		50 - 200
13C6 PFDA	121		50 - 200
13C5 PFHxA	116		50 - 200
13C4 PFHpA	117		50 - 200
13C8 PFOA	112		50 - 200
13C9 PFNA	118		50 - 200
13C7 PFUnA	127		50 - 200
13C2 PFDoA	125		50 - 200
13C4 PFBA	114		50 - 200
13C5 PFPeA	115		50 - 200
13C3 PFBS	111		50 - 200
13C3 PFHxS	109		50 - 200
13C8 PFOS	118		50 - 200
13C2-4:2-FTS	94		50 - 200
13C2-6:2-FTS	89		50 - 200
13C2-8:2-FTS	109		50 - 200

Lab Sample ID: MRL 380-255265/19-A

Matrix: Water

Analysis Batch: 255371

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 255265

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.97	1.95	J	ng/L		99	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	1.97	1.94	J	ng/L		98	50 - 150

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QC Sample Results

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

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

Lab Sample ID: MRL 380-255265/19-A

Matrix: Water

Analysis Batch: 255371

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 255265

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.97	2.02	J	ng/L		102	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.97	1.84	J	ng/L		93	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.97	1.87	J	ng/L		95	50 - 150
Perfluorodecanoic acid (PFDA)	1.97	1.96	J	ng/L		100	50 - 150
Perfluorododecanoic acid (PFDoA)	1.97	1.87	J	ng/L		95	50 - 150
Perfluoroheptanoic acid (PFHpA)	1.97	1.96	J	ng/L		100	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.97	1.76	J	ng/L		89	50 - 150
Perfluorohexanoic acid (PFHxA)	1.97	1.91	J	ng/L		97	50 - 150
Perfluorononanoic acid (PFNA)	1.97	1.90	J	ng/L		96	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.97	1.91	J	ng/L		97	50 - 150
Perfluorooctanoic acid (PFOA)	1.97	1.98	J	ng/L		101	50 - 150
Perfluoroundecanoic acid (PFUnA)	1.97	1.83	J	ng/L		93	50 - 150
Perfluorobutanoic acid (PFBA)	1.97	2.04	J	ng/L		103	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.97	2.08	J	ng/L		106	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.97	2.20	J	ng/L		111	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.97	1.99	J	ng/L		101	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1.97	1.98	J	ng/L		101	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	1.97	1.95	J	ng/L		99	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	1.97	1.91	J	ng/L		97	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	1.97	1.87	J	ng/L		95	50 - 150
Perfluoropentanoic acid (PFPeA)	1.97	1.91	J	ng/L		97	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	1.97	1.81	J	ng/L		92	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	1.97	1.71	J	ng/L		87	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits
13C3 HFPO-DA	109		50 - 200
13C6 PFDA	117		50 - 200
13C5 PFHxA	108		50 - 200
13C4 PFHpA	111		50 - 200
13C8 PFOA	106		50 - 200
13C9 PFNA	113		50 - 200
13C7 PFUnA	117		50 - 200
13C2 PFDoA	117		50 - 200
13C4 PFBA	112		50 - 200
13C5 PFPeA	114		50 - 200
13C3 PFBS	103		50 - 200
13C3 PFHxS	111		50 - 200

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QC Sample Results

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

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

Lab Sample ID: MRL 380-255265/19-A

Matrix: Water

Analysis Batch: 255371

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 255265

Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits
13C8 PFOS	109		50 - 200
13C2-4:2-FTS	86		50 - 200
13C2-6:2-FTS	79		50 - 200
13C2-8:2-FTS	104		50 - 200

Lab Sample ID: 380-238525-A-1-B MS

Matrix: Water

Analysis Batch: 255371

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 255265

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		119	111		ng/L		93	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		119	114		ng/L		96	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		119	116		ng/L		98	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		119	108		ng/L		91	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		119	106		ng/L		89	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		119	106		ng/L		89	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		119	113		ng/L		95	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		119	112		ng/L		94	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		119	104		ng/L		88	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		119	107		ng/L		90	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		119	102		ng/L		86	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		119	109		ng/L		92	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		119	104		ng/L		88	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		119	105		ng/L		89	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		119	108		ng/L		91	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		119	106		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		119	110		ng/L		93	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		119	109		ng/L		92	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		119	112		ng/L		95	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		119	112		ng/L		94	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		119	110		ng/L		92	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		119	111		ng/L		93	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		119	111		ng/L		94	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		119	104		ng/L		88	70 - 130

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QC Sample Results

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

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

Lab Sample ID: 380-238525-A-1-B MS

Matrix: Water

Analysis Batch: 255371

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 255265

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	<2.0		119	102		ng/L		86	70 - 130
Isotope Dilution									
	%Recovery	MS Qualifier	MS Limits						
13C3 HFPO-DA	114		50 - 200						
13C6 PFDA	124		50 - 200						
13C5 PFHxA	112		50 - 200						
13C4 PFHpA	113		50 - 200						
13C8 PFOA	112		50 - 200						
13C9 PFNA	119		50 - 200						
13C7 PFUnA	126		50 - 200						
13C2 PFDoA	117		50 - 200						
13C4 PFBA	112		50 - 200						
13C5 PFPeA	109		50 - 200						
13C3 PFBS	108		50 - 200						
13C3 PFHxS	108		50 - 200						
13C8 PFOS	108		50 - 200						
13C2-4:2-FTS	92		50 - 200						
13C2-6:2-FTS	85		50 - 200						
13C2-8:2-FTS	110		50 - 200						

Lab Sample ID: 380-238525-A-1-C MSD

Matrix: Water

Analysis Batch: 255371

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 255265

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		118	110		ng/L		93	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		118	111		ng/L		94	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		118	110		ng/L		93	70 - 130	6	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		118	105		ng/L		89	70 - 130	3	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		118	111		ng/L		93	70 - 130	5	30
Perfluorodecanoic acid (PFDA)	<2.0		118	106		ng/L		90	70 - 130	0	30
Perfluorododecanoic acid (PFDoA)	<2.0		118	113		ng/L		96	70 - 130	0	30
Perfluoroheptanoic acid (PFHpA)	<2.0		118	102		ng/L		86	70 - 130	9	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		118	102		ng/L		87	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		118	104		ng/L		88	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		118	109		ng/L		92	70 - 130	6	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		118	112		ng/L		94	70 - 130	3	30
Perfluorooctanoic acid (PFOA)	<2.0		118	108		ng/L		91	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		118	107		ng/L		91	70 - 130	2	30
Perfluorobutanoic acid (PFBA)	<2.0		118	108		ng/L		91	70 - 130	0	30

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QC Sample Results

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

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

Lab Sample ID: 380-238525-A-1-C MSD

Matrix: Water

Analysis Batch: 255371

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 255265

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		118	113		ng/L		96	70 - 130	7	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		118	111		ng/L		94	70 - 130	1	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		118	110		ng/L		93	70 - 130	0	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		118	105		ng/L		89	70 - 130	6	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		118	112		ng/L		95	70 - 130	0	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		118	110		ng/L		93	70 - 130	0	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		118	110		ng/L		93	70 - 130	1	30
Perfluoropentanoic acid (PFPeA)	<2.0		118	110		ng/L		93	70 - 130	1	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		118	105		ng/L		89	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		118	104		ng/L		88	70 - 130	1	30

Isotope Dilution	MSD %Recovery	MSD Qualifier	MSD Limits
13C3 HFPO-DA	119		50 - 200
13C6 PFDA	123		50 - 200
13C5 PFHxA	119		50 - 200
13C4 PFHpA	121		50 - 200
13C8 PFOA	111		50 - 200
13C9 PFNA	119		50 - 200
13C7 PFUnA	123		50 - 200
13C2 PFDoA	118		50 - 200
13C4 PFBA	114		50 - 200
13C5 PFPeA	111		50 - 200
13C3 PFBS	106		50 - 200
13C3 PFHxS	108		50 - 200
13C8 PFOS	110		50 - 200
13C2-4:2-FTS	91		50 - 200
13C2-6:2-FTS	86		50 - 200
13C2-8:2-FTS	103		50 - 200

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020

Lab Sample ID: MBL 380-255135/20-A

Matrix: Water

Analysis Batch: 255192

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 255135

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<0.98		2.0	ng/L		09/28/26 02:31	09/28/26 15:17	1
Perfluorooctanesulfonic acid (PFOS)	<0.42		2.0	ng/L		09/28/26 02:31	09/28/26 15:17	1
Perfluoroundecanoic acid (PFUnA)	<0.41		2.0	ng/L		09/28/26 02:31	09/28/26 15:17	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.57		2.0	ng/L		09/28/26 02:31	09/28/26 15:17	1

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QC Sample Results

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Lab Sample ID: MBL 380-255135/20-A

Matrix: Water

Analysis Batch: 255192

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 255135

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	<0.41		2.0	ng/L		09/28/26 02:31	09/28/26 15:17	1
Perfluorohexanoic acid (PFHxA)	<0.45		2.0	ng/L		09/28/26 02:31	09/28/26 15:17	1
Perfluorododecanoic acid (PFDoA)	<0.53		2.0	ng/L		09/28/26 02:31	09/28/26 15:17	1
Perfluorooctanoic acid (PFOA)	<0.37		2.0	ng/L		09/28/26 02:31	09/28/26 15:17	1
Perfluorodecanoic acid (PFDA)	<0.30		2.0	ng/L		09/28/26 02:31	09/28/26 15:17	1
Perfluorohexanesulfonic acid (PFHxS)	<0.31		2.0	ng/L		09/28/26 02:31	09/28/26 15:17	1
Perfluorobutanesulfonic acid (PFBS)	<0.36		2.0	ng/L		09/28/26 02:31	09/28/26 15:17	1
Perfluoroheptanoic acid (PFHpA)	<0.38		2.0	ng/L		09/28/26 02:31	09/28/26 15:17	1
Perfluorononanoic acid (PFNA)	<0.39		2.0	ng/L		09/28/26 02:31	09/28/26 15:17	1
Perfluorotetradecanoic acid (PFTA)	<0.53		2.0	ng/L		09/28/26 02:31	09/28/26 15:17	1
Perfluorotridecanoic acid (PFTDA)	<0.35		2.0	ng/L		09/28/26 02:31	09/28/26 15:17	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.29		2.0	ng/L		09/28/26 02:31	09/28/26 15:17	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.29		2.0	ng/L		09/28/26 02:31	09/28/26 15:17	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.59		2.0	ng/L		09/28/26 02:31	09/28/26 15:17	1

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NETFOSAA	107		70 - 130	09/28/26 02:31	09/28/26 15:17	1
13C2 PFHxA	112		70 - 130	09/28/26 02:31	09/28/26 15:17	1
13C2 PFDA	114		70 - 130	09/28/26 02:31	09/28/26 15:17	1
13C3-GenX	104		70 - 130	09/28/26 02:31	09/28/26 15:17	1

Lab Sample ID: LCS 380-255135/22-A

Matrix: Water

Analysis Batch: 255192

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 255135

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	24.6	25.1		ng/L		102	70 - 130
Perfluorooctanesulfonic acid (PFOS)	24.6	26.0		ng/L		106	70 - 130
Perfluoroundecanoic acid (PFUnA)	24.6	27.0		ng/L		110	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	24.6	25.8		ng/L		105	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	24.6	25.7		ng/L		105	70 - 130
Perfluorohexanoic acid (PFHxA)	24.6	26.1		ng/L		106	70 - 130
Perfluorododecanoic acid (PFDoA)	24.6	25.5		ng/L		104	70 - 130
Perfluorooctanoic acid (PFOA)	24.6	26.5		ng/L		108	70 - 130
Perfluorodecanoic acid (PFDA)	24.6	25.7		ng/L		105	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	24.6	26.6		ng/L		108	70 - 130
Perfluorobutanesulfonic acid (PFBS)	24.6	26.5		ng/L		108	70 - 130
Perfluoroheptanoic acid (PFHpA)	24.6	26.1		ng/L		106	70 - 130
Perfluorononanoic acid (PFNA)	24.6	25.8		ng/L		105	70 - 130

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QC Sample Results

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Lab Sample ID: LCS 380-255135/22-A

Matrix: Water

Analysis Batch: 255192

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 255135

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorotetradecanoic acid (PFTA)	24.6	25.0		ng/L		102	70 - 130
Perfluorotridecanoic acid (PFTTrDA)	24.6	25.6		ng/L		104	70 - 130
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid(9Cl-PF3ONS)	24.6	26.6		ng/L		108	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	24.6	25.7		ng/L		104	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	24.6	25.9		ng/L		106	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NeFOSAA	108		70 - 130
13C2 PFHxA	110		70 - 130
13C2 PFDA	111		70 - 130
13C3-GenX	110		70 - 130

Lab Sample ID: MRL 380-255135/21-A

Matrix: Water

Analysis Batch: 255192

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 255135

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.96	1.84	J	ng/L		94	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.96	2.20	J	ng/L		112	50 - 150
Perfluoroundecanoic acid (PFUnA)	1.96	2.03	J	ng/L		104	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.96	1.95	J	ng/L		99	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.96	2.04	J	ng/L		104	50 - 150
Perfluorohexanoic acid (PFHxA)	1.96	2.07	J	ng/L		105	50 - 150
Perfluorododecanoic acid (PFDoA)	1.96	2.00	J	ng/L		102	50 - 150
Perfluorooctanoic acid (PFOA)	1.96	2.09	J	ng/L		106	50 - 150
Perfluorodecanoic acid (PFDA)	1.96	2.38	J	ng/L		121	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.96	2.30	J	ng/L		117	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.96	2.15	J	ng/L		109	50 - 150
Perfluoroheptanoic acid (PFHpA)	1.96	2.08	J	ng/L		106	50 - 150
Perfluorononanoic acid (PFNA)	1.96	2.07	J	ng/L		106	50 - 150
Perfluorotetradecanoic acid (PFTA)	1.96	1.88	J	ng/L		96	50 - 150
Perfluorotridecanoic acid (PFTTrDA)	1.96	2.05	J	ng/L		105	50 - 150
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid(9Cl-PF3ONS)	1.96	2.23	J	ng/L		114	50 - 150

Eurofins Pomona

QC Sample Results

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Lab Sample ID: MRL 380-255135/21-A

Matrix: Water

Analysis Batch: 255192

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 255135

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.96	2.10	J	ng/L		107	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.96	1.95	J	ng/L		99	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	105		70 - 130
13C2 PFHxA	105		70 - 130
13C2 PFDA	108		70 - 130
13C3-GenX	101		70 - 130

Lab Sample ID: 380-238380-1 MS

Matrix: Drinking Water

Analysis Batch: 255192

Client Sample ID: BWS2253-J1-AQ

Prep Type: Total/NA

Prep Batch: 255135

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		49.1	51.4		ng/L		105	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorooctanesulfonic acid (PFOS)	<2.0		49.1	50.8		ng/L		103	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		49.1	53.0		ng/L		108	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		49.1	49.9		ng/L		102	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		49.1	48.3		ng/L		98	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		49.1	53.6		ng/L		109	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		49.1	50.8		ng/L		103	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		49.1	51.4		ng/L		104	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		49.1	54.0		ng/L		110	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		49.1	50.8		ng/L		103	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		49.1	51.9		ng/L		106	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		49.1	52.0		ng/L		106	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		49.1	53.3		ng/L		109	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		49.1	48.8		ng/L		99	70 - 130
Perfluorotridecanoic acid (PFTTrDA)	<2.0		49.1	51.8		ng/L		105	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		49.1	50.8		ng/L		104	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		49.1	49.3		ng/L		100	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		49.1	52.1		ng/L		106	70 - 130

QC Sample Results

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

Method: EPA 537.1 V2 - EPA 537.1 Ver. 2.0 March 2020 (Continued)

Lab Sample ID: 380-238380-1 MS

Matrix: Drinking Water

Analysis Batch: 255192

Client Sample ID: BWS2253-J1-AQ

Prep Type: Total/NA

Prep Batch: 255135

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
d5-NEtFOSAA	110		70 - 130
13C2 PFHxA	114		70 - 130
13C2 PFDA	114		70 - 130
13C3-GenX	116		70 - 130

Lab Sample ID: 380-238380-1 MSD

Matrix: Drinking Water

Analysis Batch: 255192

Client Sample ID: BWS2253-J1-AQ

Prep Type: Total/NA

Prep Batch: 255135

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide	<2.0		49.1	50.9		ng/L		104	70 - 130	1	30
Dimer Acid (HFPO-DA/GenX)											
Perfluorooctanesulfonic acid (PFOS)	<2.0		49.1	51.9		ng/L		106	70 - 130	2	30
Perfluoroundecanoic acid (PFUnA)	<2.0		49.1	50.5		ng/L		103	70 - 130	5	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		49.1	50.1		ng/L		102	70 - 130	0	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		49.1	49.2		ng/L		100	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		49.1	51.8		ng/L		106	70 - 130	3	30
Perfluorododecanoic acid (PFDoA)	<2.0		49.1	49.7		ng/L		101	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	<2.0		49.1	51.9		ng/L		105	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		49.1	50.4		ng/L		103	70 - 130	7	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		49.1	52.0		ng/L		106	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		49.1	51.0		ng/L		104	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	<2.0		49.1	50.5		ng/L		103	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		49.1	51.4		ng/L		105	70 - 130	4	30
Perfluorotetradecanoic acid (PFTA)	<2.0		49.1	50.6		ng/L		103	70 - 130	4	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		49.1	48.0		ng/L		98	70 - 130	8	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		49.1	51.3		ng/L		104	70 - 130	1	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		49.1	50.0		ng/L		102	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		49.1	50.2		ng/L		102	70 - 130	4	30

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
d5-NEtFOSAA	106		70 - 130
13C2 PFHxA	111		70 - 130
13C2 PFDA	113		70 - 130
13C3-GenX	111		70 - 130

QC Association Summary

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

LCMS

Prep Batch: 255135

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-238380-1	BWS2253-J1-AQ	Total/NA	Drinking Water	537.1 DW	
380-238380-2	BWS2253-J1-FB	Total/NA	Water	537.1 DW	
MBL 380-255135/20-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-255135/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-255135/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-238380-1 MS	BWS2253-J1-AQ	Total/NA	Drinking Water	537.1 DW	
380-238380-1 MSD	BWS2253-J1-AQ	Total/NA	Drinking Water	537.1 DW	

Prep Batch: 255137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-238380-1	BWS2253-J1-AQ	Total/NA	Drinking Water	533	
MBL 380-255137/19-A	Method Blank	Total/NA	Water	533	
LCS 380-255137/21-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-255137/20-A	Lab Control Sample	Total/NA	Water	533	
380-238398-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-238398-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 255192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-238380-1	BWS2253-J1-AQ	Total/NA	Drinking Water	EPA 537.1 V2	255135
380-238380-2	BWS2253-J1-FB	Total/NA	Water	EPA 537.1 V2	255135
MBL 380-255135/20-A	Method Blank	Total/NA	Water	EPA 537.1 V2	255135
LCS 380-255135/22-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	255135
MRL 380-255135/21-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	255135
380-238380-1 MS	BWS2253-J1-AQ	Total/NA	Drinking Water	EPA 537.1 V2	255135
380-238380-1 MSD	BWS2253-J1-AQ	Total/NA	Drinking Water	EPA 537.1 V2	255135

Analysis Batch: 255220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-238380-1	BWS2253-J1-AQ	Total/NA	Drinking Water	533	255137
MBL 380-255137/19-A	Method Blank	Total/NA	Water	533	255137
LCS 380-255137/21-A	Lab Control Sample	Total/NA	Water	533	255137
MRL 380-255137/20-A	Lab Control Sample	Total/NA	Water	533	255137
380-238398-B-1-A MS	Matrix Spike	Total/NA	Water	533	255137
380-238398-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	255137

Prep Batch: 255265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-238380-2	BWS2253-J1-FB	Total/NA	Water	533	
MBL 380-255265/18-A	Method Blank	Total/NA	Water	533	
LCS 380-255265/20-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-255265/19-A	Lab Control Sample	Total/NA	Water	533	
380-238525-A-1-B MS	Matrix Spike	Total/NA	Water	533	
380-238525-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 255371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-238380-2	BWS2253-J1-FB	Total/NA	Water	533	255265
MBL 380-255265/18-A	Method Blank	Total/NA	Water	533	255265
LCS 380-255265/20-A	Lab Control Sample	Total/NA	Water	533	255265
MRL 380-255265/19-A	Lab Control Sample	Total/NA	Water	533	255265

Eurofins Pomona

QC Association Summary

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

LCMS (Continued)

Analysis Batch: 255371 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-238525-A-1-B MS	Matrix Spike	Total/NA	Water	533	255265
380-238525-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	533	255265

Lab Chronicle

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-238380-1

Date Collected: 09/24/26 12:15

Matrix: Drinking Water

Date Received: 09/25/26 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			255137	XTD8	EA POM	09/28/26 07:24
Total/NA	Analysis	533		1	255220	M7ML	EA POM	09/28/26 19:54
Total/NA	Prep	537.1 DW			255135	G9MN	EA POM	09/28/26 02:31
Total/NA	Analysis	EPA 537.1 V2		1	255192	UKDT	EA POM	09/28/26 15:46

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-238380-2

Date Collected: 09/24/26 12:15

Matrix: Water

Date Received: 09/25/26 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			255265	XTD8	EA POM	09/29/26 07:47
Total/NA	Analysis	533		1	255371	Y7BM	EA POM	09/29/26 18:19
Total/NA	Prep	537.1 DW			255135	G9MN	EA POM	09/28/26 02:31
Total/NA	Analysis	EPA 537.1 V2		1	255192	UKDT	EA POM	09/28/26 18:10

Laboratory References:

EA POM = Eurofins 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: 380-238380-1
SDG: Site J1 PFAS 533/537.1

Laboratory: Eurofins Pomona

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

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	01-31-27

- 1
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Method Summary

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

Job ID: 380-238380-1
SDG: Site J1 PFAS 533/537.1

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA POM
EPA 537.1 V2	EPA 537.1 Ver. 2.0 March 2020	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 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: 380-238380-1
SDG: Site J1 PFAS 533/537.1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-238380-1	BWS2253-J1-AQ	Drinking Water	09/24/26 12:15	09/25/26 10:00	Hawaii
380-238380-2	BWS2253-J1-FB	Water	09/24/26 12:15	09/25/26 10:00	Hawaii

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Eurofins Pomona
941 Corporate Center Drive
Pomona, CA 91766-2642
Phone (626) 386-1100

Chain of Custody Record



Client Information		Sampler:	Lab Pkt:	Carrier Tracking No(s):	COC No:
Client Contact:		H. Bentley (808) 321-0683	Lopez, Maria		
Mr. Erwin Kawata		Phone:	E-Mail:	State of Origin:	Page:
		858-205-0730	Maria.Lopez@eurofins.com	Hawaii	Page 1 of 1
Company:		PWSID:	Job #:		

City & County of Honolulu		Analysis Requested			
Address:		Preservation Codes:			
630 South Beretania Street		A - HCL			
City:		N - None			
Honolulu		I - AMMONIUM ACETATE			
State, Zip:		Y - TRIZMA			
HI, 96843					
Phone:		Other:			
808-748-5066					
Email:					
ekawata@hbws.org					
Project Name:					
INTERA - Red-Hill Incident					
Site:					
J1					

Due Date Requested:		TAT Requested (days):		Compliance Project: ☐ Yes ☒ No	
		Standard			
PO #:		WO #:			
Project #:		SSOW#:			
38000861					

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, BT=Tissue, A=Air, DW=Drinking Water)	Field Filtered Sample (Yes or No)	S33 - All Analytes	S37.1 - LW, PREC - S37.1 Full List	Total Number of Containers	Special Instructions/Note:
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BWS2253-J1-AQ	9/24/26	1215	G	Water	N	N	3	6	
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BWS2253-J1-FB	11	15	G	Water	N	N	1	2	FIELD REAGENT BLANK
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Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-238380-1
SDG Number: Site J1 PFAS 533/537.1

Login Number: 238380

List Number: 1

Creator: Abaya, Ashton

List Source: Eurofins Pomona

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