



ANALYTICAL REPORT

PREPARED FOR

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Honolulu, Hawaii 96843

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JOB DESCRIPTION

INTERA - Red-Hill-Incident
Site H1 PFAS 533/537.1

JOB NUMBER

380-202572-1

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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: 380-202572-1
SDG: Site H1 PFAS 533/537.1

Qualifiers

LCMS

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

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: 380-202572-1

Job ID: 380-202572-1

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Job Narrative 380-202572-1

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 3/11/2026 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.9°C.

PFAS

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

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Detection Summary

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

Job ID: 380-202572-1
SDG: Site H1 PFAS 533/537.1

Client Sample ID: BWS2253-H1-AQ

Lab Sample ID: 380-202572-1

No Detections.

Client Sample ID: BWS2253-H1-FB

Lab Sample ID: 380-202572-2

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: 380-202572-1
SDG: Site H1 PFAS 533/537.1

Client Sample ID: BWS2253-H1-AQ

Lab Sample ID: 380-202572-1

Date Collected: 03/10/26 09:15

Matrix: Water

Date Received: 03/11/26 09:30

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		03/23/26 05:59	03/24/26 02:14	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:14	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	100		50 - 200	03/23/26 05:59	03/24/26 02:14	1
13C6 PFDA	104		50 - 200	03/23/26 05:59	03/24/26 02:14	1
13C5 PFHxA	104		50 - 200	03/23/26 05:59	03/24/26 02:14	1
13C4 PFHpA	101		50 - 200	03/23/26 05:59	03/24/26 02:14	1
13C8 PFOA	105		50 - 200	03/23/26 05:59	03/24/26 02:14	1
13C9 PFNA	104		50 - 200	03/23/26 05:59	03/24/26 02:14	1
13C7 PFUnA	109		50 - 200	03/23/26 05:59	03/24/26 02:14	1
13C2 PFDoA	106		50 - 200	03/23/26 05:59	03/24/26 02:14	1
13C4 PFBA	111		50 - 200	03/23/26 05:59	03/24/26 02:14	1
13C5 PFPeA	114		50 - 200	03/23/26 05:59	03/24/26 02:14	1
13C3 PFBS	108		50 - 200	03/23/26 05:59	03/24/26 02:14	1
13C3 PFHxS	117		50 - 200	03/23/26 05:59	03/24/26 02:14	1
13C8 PFOS	110		50 - 200	03/23/26 05:59	03/24/26 02:14	1

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Client Sample Results

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

Job ID: 380-202572-1
SDG: Site H1 PFAS 533/537.1

Client Sample ID: BWS2253-H1-AQ

Lab Sample ID: 380-202572-1

Date Collected: 03/10/26 09:15

Matrix: Water

Date Received: 03/11/26 09:30

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	101		50 - 200	03/23/26 05:59	03/24/26 02:14	1
13C2-6:2-FTS	104		50 - 200	03/23/26 05:59	03/24/26 02:14	1
13C2-8:2-FTS	102		50 - 200	03/23/26 05:59	03/24/26 02:14	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		03/14/26 06:43	03/15/26 21:26	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:26	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:26	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:26	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:26	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:26	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:26	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:26	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:26	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:26	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:26	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:26	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:26	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:26	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:26	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:26	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	103		70 - 130			03/14/26 06:43	03/15/26 21:26	1
13C2 PFHxA	105		70 - 130			03/14/26 06:43	03/15/26 21:26	1
13C2 PFDA	102		70 - 130			03/14/26 06:43	03/15/26 21:26	1
13C3-GenX	98		70 - 130			03/14/26 06:43	03/15/26 21:26	1

Client Sample ID: BWS2253-H1-FB

Lab Sample ID: 380-202572-2

Date Collected: 03/10/26 09:15

Matrix: Water

Date Received: 03/11/26 09:30

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		03/23/26 05:59	03/24/26 02:24	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1

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Client Sample Results

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

Job ID: 380-202572-1
SDG: Site H1 PFAS 533/537.1

Client Sample ID: BWS2253-H1-FB

Lab Sample ID: 380-202572-2

Date Collected: 03/10/26 09:15

Matrix: Water

Date Received: 03/11/26 09:30

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		03/23/26 05:59	03/24/26 02:24	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		03/23/26 05:59	03/24/26 02:24	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	93		50 - 200	03/23/26 05:59	03/24/26 02:24	1
13C6 PFDA	110		50 - 200	03/23/26 05:59	03/24/26 02:24	1
13C5 PFHxA	106		50 - 200	03/23/26 05:59	03/24/26 02:24	1
13C4 PFHpA	109		50 - 200	03/23/26 05:59	03/24/26 02:24	1
13C8 PFOA	107		50 - 200	03/23/26 05:59	03/24/26 02:24	1
13C9 PFNA	108		50 - 200	03/23/26 05:59	03/24/26 02:24	1
13C7 PFUnA	110		50 - 200	03/23/26 05:59	03/24/26 02:24	1
13C2 PFDoA	113		50 - 200	03/23/26 05:59	03/24/26 02:24	1
13C4 PFBA	112		50 - 200	03/23/26 05:59	03/24/26 02:24	1
13C5 PFPeA	112		50 - 200	03/23/26 05:59	03/24/26 02:24	1
13C3 PFBS	111		50 - 200	03/23/26 05:59	03/24/26 02:24	1
13C3 PFHxS	118		50 - 200	03/23/26 05:59	03/24/26 02:24	1
13C8 PFOS	110		50 - 200	03/23/26 05:59	03/24/26 02:24	1
13C2-4:2-FTS	105		50 - 200	03/23/26 05:59	03/24/26 02:24	1
13C2-6:2-FTS	108		50 - 200	03/23/26 05:59	03/24/26 02:24	1
13C2-8:2-FTS	109		50 - 200	03/23/26 05:59	03/24/26 02:24	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		03/14/26 06:43	03/15/26 21:35	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:35	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:35	1

Eurofins Pomona

Client Sample Results

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

Job ID: 380-202572-1
SDG: Site H1 PFAS 533/537.1

Client Sample ID: BWS2253-H1-FB

Lab Sample ID: 380-202572-2

Date Collected: 03/10/26 09:15

Matrix: Water

Date Received: 03/11/26 09:30

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		03/14/26 06:43	03/15/26 21:35	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:35	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:35	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:35	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:35	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:35	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:35	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:35	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:35	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:35	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:35	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:35	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:35	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:35	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/14/26 06:43	03/15/26 21:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	97		70 - 130			03/14/26 06:43	03/15/26 21:35	1
13C2 PFHxA	92		70 - 130			03/14/26 06:43	03/15/26 21:35	1
13C2 PFDA	98		70 - 130			03/14/26 06:43	03/15/26 21:35	1
13C3-GenX	84		70 - 130			03/14/26 06:43	03/15/26 21:35	1

Action Limit Summary

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

Job ID: 380-202572-1
SDG: Site H1 PFAS 533/537.1

Client Sample ID: BWS2253-H1-AQ

Lab Sample ID: 380-202572-1

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-H1-FB

Lab Sample ID: 380-202572-2

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: 380-202572-1
SDG: Site H1 PFAS 533/537.1

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)
380-202572-1	BWS2253-H1-AQ	103	105	102	98
380-202572-2	BWS2253-H1-FB	97	92	98	84
380-202871-B-1-A MS	Matrix Spike	135 S1+	109	103	101
380-202871-C-1-A MSD	Matrix Spike Duplicate	121	106	105	100
LCS 380-213209/23-A	Lab Control Sample	101	116	110	109
MBL 380-213209/21-A	Method Blank	87	94	100	85
MRL 380-213209/22-A	Lab Control Sample	91	97	103	83

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: 380-202572-1
SDG: Site H1 PFAS 533/537.1

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)
380-202559-B-3-A MS	Matrix Spike	113	121	109	111	114	115	118	119
380-202559-C-3-A MSD	Matrix Spike Duplicate	100	106	103	106	108	108	110	111
380-202572-1	BWS2253-H1-AQ	100	104	104	101	105	104	109	106
380-202572-2	BWS2253-H1-FB	93	110	106	109	107	108	110	113
LCS 380-215077/22-A	Lab Control Sample	84	112	109	109	108	107	114	115
MBL 380-215077/20-A	Method Blank	71	99	102	99	101	97	101	103
MRL 380-215077/21-A	Lab Control Sample	81	105	104	103	101	101	107	109

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-202559-B-3-A MS	Matrix Spike	118	122	111	116	111	105	105	111
380-202559-C-3-A MSD	Matrix Spike Duplicate	111	115	108	113	109	103	109	110
380-202572-1	BWS2253-H1-AQ	111	114	108	117	110	101	104	102
380-202572-2	BWS2253-H1-FB	112	112	111	118	110	105	108	109
LCS 380-215077/22-A	Lab Control Sample	110	111	113	118	109	101	108	110
MBL 380-215077/20-A	Method Blank	105	104	106	115	106	106	108	110
MRL 380-215077/21-A	Lab Control Sample	103	105	110	114	110	99	107	111

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: 380-202572-1
SDG: Site H1 PFAS 533/537.1

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

Lab Sample ID: MBL 380-215077/20-A
Matrix: Water
Analysis Batch: 215232

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 215077

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<0.30		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	<0.30		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		03/23/26 05:59	03/23/26 22:38	1
Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	71		50 - 200			03/23/26 05:59	03/23/26 22:38	1
13C6 PFDA	99		50 - 200			03/23/26 05:59	03/23/26 22:38	1
13C5 PFHxA	102		50 - 200			03/23/26 05:59	03/23/26 22:38	1
13C4 PFHpA	99		50 - 200			03/23/26 05:59	03/23/26 22:38	1
13C8 PFOA	101		50 - 200			03/23/26 05:59	03/23/26 22:38	1
13C9 PFNA	97		50 - 200			03/23/26 05:59	03/23/26 22:38	1
13C7 PFUnA	101		50 - 200			03/23/26 05:59	03/23/26 22:38	1
13C2 PFDoA	103		50 - 200			03/23/26 05:59	03/23/26 22:38	1
13C4 PFBA	105		50 - 200			03/23/26 05:59	03/23/26 22:38	1
13C5 PFPeA	104		50 - 200			03/23/26 05:59	03/23/26 22:38	1
13C3 PFBS	106		50 - 200			03/23/26 05:59	03/23/26 22:38	1
13C3 PFHxS	115		50 - 200			03/23/26 05:59	03/23/26 22:38	1

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QC Sample Results

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

Job ID: 380-202572-1
SDG: Site H1 PFAS 533/537.1

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

Lab Sample ID: MBL 380-215077/20-A

Matrix: Water

Analysis Batch: 215232

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 215077

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	106		50 - 200	03/23/26 05:59	03/23/26 22:38	1
13C2-4:2-FTS	106		50 - 200	03/23/26 05:59	03/23/26 22:38	1
13C2-6:2-FTS	108		50 - 200	03/23/26 05:59	03/23/26 22:38	1
13C2-8:2-FTS	110		50 - 200	03/23/26 05:59	03/23/26 22:38	1

Lab Sample ID: LCS 380-215077/22-A

Matrix: Water

Analysis Batch: 215232

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 215077

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.1	54.8		ng/L		91	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.1	55.6		ng/L		92	70 - 130
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	60.1	53.0		ng/L		88	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.1	54.4		ng/L		90	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.1	52.7		ng/L		88	70 - 130
Perfluorodecanoic acid (PFDA)	60.1	54.7		ng/L		91	70 - 130
Perfluorododecanoic acid (PFDoA)	60.1	54.8		ng/L		91	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.1	53.4		ng/L		89	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.1	52.0		ng/L		87	70 - 130
Perfluorohexanoic acid (PFHxA)	60.1	51.6		ng/L		86	70 - 130
Perfluorononanoic acid (PFNA)	60.1	55.8		ng/L		93	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.1	56.4		ng/L		94	70 - 130
Perfluorooctanoic acid (PFOA)	60.1	55.3		ng/L		92	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.1	54.2		ng/L		90	70 - 130
Perfluorobutanoic acid (PFBA)	60.1	54.8		ng/L		91	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.1	58.4		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.1	57.6		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.1	55.7		ng/L		93	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.1	48.2		ng/L		80	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	60.1	52.7		ng/L		88	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.1	55.5		ng/L		92	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.1	53.8		ng/L		89	70 - 130
Perfluoropentanoic acid (PFPeA)	60.1	56.4		ng/L		94	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.1	56.0		ng/L		93	70 - 130

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QC Sample Results

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

Job ID: 380-202572-1
SDG: Site H1 PFAS 533/537.1

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

Lab Sample ID: LCS 380-215077/22-A

Matrix: Water

Analysis Batch: 215232

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 215077

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	60.1	51.0		ng/L		85	70 - 130
		LCS	LCS				
		%Recovery	Qualifier	Limits			
13C3 HFPO-DA	84			50 - 200			
13C6 PFDA	112			50 - 200			
13C5 PFHxA	109			50 - 200			
13C4 PFHpA	109			50 - 200			
13C8 PFOA	108			50 - 200			
13C9 PFNA	107			50 - 200			
13C7 PFUnA	114			50 - 200			
13C2 PFDoA	115			50 - 200			
13C4 PFBA	110			50 - 200			
13C5 PFPeA	111			50 - 200			
13C3 PFBS	113			50 - 200			
13C3 PFHxS	118			50 - 200			
13C8 PFOS	109			50 - 200			
13C2-4:2-FTS	101			50 - 200			
13C2-6:2-FTS	108			50 - 200			
13C2-8:2-FTS	110			50 - 200			

Lab Sample ID: MRL 380-215077/21-A

Matrix: Water

Analysis Batch: 215232

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 215077

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	1.93	J	ng/L		96	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	2.10	J	ng/L		105	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	1.95	J	ng/L		97	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.06	J	ng/L		103	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	1.94	J	ng/L		96	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.02	J	ng/L		100	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.05	J	ng/L		102	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.08	J	ng/L		104	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	1.95	J	ng/L		97	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.02	J	ng/L		101	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.04	J	ng/L		102	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.06	J	ng/L		103	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.07	J	ng/L		103	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.13	J	ng/L		106	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	2.13	J	ng/L		106	50 - 150

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QC Sample Results

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

Job ID: 380-202572-1
SDG: Site H1 PFAS 533/537.1

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

Lab Sample ID: MRL 380-215077/21-A

Matrix: Water

Analysis Batch: 215232

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 215077

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.14	J	ng/L		106	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.28	J	ng/L		114	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.33	J	ng/L		116	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	1.72	J	ng/L		86	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.01	1.99	J	ng/L		99	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.06	J	ng/L		102	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	1.87	J	ng/L		93	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	2.00	J	ng/L		100	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	1.98	J	ng/L		98	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	1.96	J	ng/L		97	50 - 150

Isotope Dilution	%Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	81		50 - 200
13C6 PFDA	105		50 - 200
13C5 PFHxA	104		50 - 200
13C4 PFHpA	103		50 - 200
13C8 PFOA	101		50 - 200
13C9 PFNA	101		50 - 200
13C7 PFUnA	107		50 - 200
13C2 PFDoA	109		50 - 200
13C4 PFBA	103		50 - 200
13C5 PFPeA	105		50 - 200
13C3 PFBS	110		50 - 200
13C3 PFHxS	114		50 - 200
13C8 PFOS	110		50 - 200
13C2-4:2-FTS	99		50 - 200
13C2-6:2-FTS	107		50 - 200
13C2-8:2-FTS	111		50 - 200

Lab Sample ID: 380-202559-B-3-A MS

Matrix: Water

Analysis Batch: 215232

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 215077

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.2	53.0		ng/L		88	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.2	53.2		ng/L		88	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.2	53.9		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: 380-202572-1
SDG: Site H1 PFAS 533/537.1

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

Lab Sample ID: 380-202559-B-3-A MS

Matrix: Water

Analysis Batch: 215232

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 215077

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		60.2	53.9		ng/L		89	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.2	54.0		ng/L		88	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		60.2	53.8		ng/L		89	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.2	54.9		ng/L		91	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		60.2	55.6		ng/L		91	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.2	52.7		ng/L		85	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		60.2	56.8		ng/L		93	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.2	54.2		ng/L		90	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.2	56.1		ng/L		90	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		60.2	53.8		ng/L		88	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.2	54.4		ng/L		90	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		60.2	53.7		ng/L		88	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.2	56.6		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.2	56.7		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.2	56.2		ng/L		93	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.2	48.8		ng/L		81	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		60.2	53.9		ng/L		90	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.2	54.5		ng/L		91	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.2	52.0		ng/L		86	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		60.2	55.6		ng/L		90	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.2	53.5		ng/L		89	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.2	51.4		ng/L		85	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C3 HFPO-DA	113		50 - 200
13C6 PFDA	121		50 - 200
13C5 PFHxA	109		50 - 200
13C4 PFHpA	111		50 - 200
13C8 PFOA	114		50 - 200
13C9 PFNA	115		50 - 200
13C7 PFUnA	118		50 - 200
13C2 PFDoA	119		50 - 200
13C4 PFBA	118		50 - 200
13C5 PFPeA	122		50 - 200
13C3 PFBS	111		50 - 200
13C3 PFHxS	116		50 - 200
13C8 PFOS	111		50 - 200

QC Sample Results

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

Job ID: 380-202572-1
SDG: Site H1 PFAS 533/537.1

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

Lab Sample ID: 380-202559-B-3-A MS

Matrix: Water

Analysis Batch: 215232

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 215077

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	105		50 - 200
13C2-6:2-FTS	105		50 - 200
13C2-8:2-FTS	111		50 - 200

Lab Sample ID: 380-202559-C-3-A MSD

Matrix: Water

Analysis Batch: 215232

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 215077

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	55.5		ng/L		92	70 - 130	4	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.2	56.2		ng/L		93	70 - 130	6	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.2	56.8		ng/L		94	70 - 130	5	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.2	59.6		ng/L		99	70 - 130	10	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.2	56.9		ng/L		93	70 - 130	5	30
Perfluorodecanoic acid (PFDA)	<2.0		60.2	56.7		ng/L		94	70 - 130	5	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.2	56.9		ng/L		95	70 - 130	4	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.2	57.2		ng/L		94	70 - 130	3	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.2	56.0		ng/L		90	70 - 130	6	30
Perfluorohexanoic acid (PFHxA)	<2.0		60.2	56.7		ng/L		93	70 - 130	0	30
Perfluorononanoic acid (PFNA)	<2.0		60.2	58.5		ng/L		97	70 - 130	8	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.2	60.0		ng/L		96	70 - 130	7	30
Perfluorooctanoic acid (PFOA)	<2.0		60.2	58.2		ng/L		95	70 - 130	8	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.2	58.1		ng/L		96	70 - 130	7	30
Perfluorobutanoic acid (PFBA)	<2.0		60.2	57.5		ng/L		94	70 - 130	7	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.2	59.4		ng/L		99	70 - 130	5	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.2	56.3		ng/L		93	70 - 130	1	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.2	57.9		ng/L		96	70 - 130	3	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.2	52.1		ng/L		87	70 - 130	7	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		60.2	56.9		ng/L		95	70 - 130	5	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.2	56.3		ng/L		94	70 - 130	3	30
Perfluoro-4-methoxybutanoic acid (PFMPA)	<2.0		60.2	53.8		ng/L		89	70 - 130	3	30
Perfluoropentanoic acid (PFPeA)	<2.0		60.2	58.7		ng/L		95	70 - 130	5	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.2	59.2		ng/L		98	70 - 130	10	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.2	56.1		ng/L		93	70 - 130	9	30

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QC Sample Results

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

Job ID: 380-202572-1
SDG: Site H1 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	100		50 - 200
13C6 PFDA	106		50 - 200
13C5 PFHxA	103		50 - 200
13C4 PFHpA	106		50 - 200
13C8 PFOA	108		50 - 200
13C9 PFNA	108		50 - 200
13C7 PFUnA	110		50 - 200
13C2 PFDoA	111		50 - 200
13C4 PFBA	111		50 - 200
13C5 PFPeA	115		50 - 200
13C3 PFBS	108		50 - 200
13C3 PFHxS	113		50 - 200
13C8 PFOS	109		50 - 200
13C2-4:2-FTS	103		50 - 200
13C2-6:2-FTS	109		50 - 200
13C2-8:2-FTS	110		50 - 200

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

Lab Sample ID: MBL 380-213209/21-A
Matrix: Water
Analysis Batch: 213274

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 213209

Analyte	MBL MBL		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		03/14/26 06:43	03/15/26 20:10	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		03/14/26 06:43	03/15/26 20:10	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		03/14/26 06:43	03/15/26 20:10	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		03/14/26 06:43	03/15/26 20:10	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		03/14/26 06:43	03/15/26 20:10	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		03/14/26 06:43	03/15/26 20:10	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		03/14/26 06:43	03/15/26 20:10	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		03/14/26 06:43	03/15/26 20:10	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		03/14/26 06:43	03/15/26 20:10	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		03/14/26 06:43	03/15/26 20:10	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		03/14/26 06:43	03/15/26 20:10	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		03/14/26 06:43	03/15/26 20:10	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		03/14/26 06:43	03/15/26 20:10	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		03/14/26 06:43	03/15/26 20:10	1
Perfluorotridecanoic acid (PFTTrDA)	<0.36		2.0	ng/L		03/14/26 06:43	03/15/26 20:10	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.30		2.0	ng/L		03/14/26 06:43	03/15/26 20:10	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		03/14/26 06:43	03/15/26 20:10	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		03/14/26 06:43	03/15/26 20:10	1
Surrogate	MBL MBL		Limits			Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
d5-NEtFOSAA	87		70 - 130			03/14/26 06:43	03/15/26 20:10	1
13C2 PFHxA	94		70 - 130			03/14/26 06:43	03/15/26 20:10	1
13C2 PFDA	100		70 - 130			03/14/26 06:43	03/15/26 20:10	1

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QC Sample Results

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

Job ID: 380-202572-1
SDG: Site H1 PFAS 533/537.1

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

Lab Sample ID: MBL 380-213209/21-A

Matrix: Water

Analysis Batch: 213274

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 213209

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-GenX	85		70 - 130	03/14/26 06:43	03/15/26 20:10	1

Lab Sample ID: LCS 380-213209/23-A

Matrix: Water

Analysis Batch: 213274

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 213209

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	50.2	48.7		ng/L		97	70 - 130
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	50.2	54.4		ng/L		108	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.2	49.5		ng/L		99	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.2	51.1		ng/L		102	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.2	47.6		ng/L		95	70 - 130
Perfluorohexanoic acid (PFHxA)	50.2	51.7		ng/L		103	70 - 130
Perfluorododecanoic acid (PFDoA)	50.2	50.9		ng/L		101	70 - 130
Perfluorooctanoic acid (PFOA)	50.2	50.3		ng/L		100	70 - 130
Perfluorodecanoic acid (PFDA)	50.2	52.4		ng/L		104	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.2	52.5		ng/L		105	70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.2	52.0		ng/L		104	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.2	52.3		ng/L		104	70 - 130
Perfluorononanoic acid (PFNA)	50.2	52.0		ng/L		104	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.2	38.0		ng/L		76	70 - 130
Perfluorotridecanoic acid (PFTrDA)	50.2	49.1		ng/L		98	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	50.2	52.8		ng/L		105	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	50.2	50.8		ng/L		101	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.2	51.8		ng/L		103	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	101		70 - 130
13C2 PFHxA	116		70 - 130
13C2 PFDA	110		70 - 130
13C3-GenX	109		70 - 130

QC Sample Results

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

Job ID: 380-202572-1
SDG: Site H1 PFAS 533/537.1

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

Lab Sample ID: MRL 380-213209/22-A

Matrix: Water

Analysis Batch: 213274

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 213209

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	2.01	1.82	J	ng/L		91	50 - 150
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	2.01	2.25	J	ng/L		112	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.09	J	ng/L		104	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.01	1.92	J	ng/L		96	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.01	2.04	J	ng/L		102	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.18	J	ng/L		109	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.16	J	ng/L		107	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.14	J	ng/L		107	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.15	J	ng/L		107	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.22	J	ng/L		111	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	1.98	J	ng/L		98	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.17	J	ng/L		108	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.28	J	ng/L		113	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.01	1.78	J	ng/L		88	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.01	2.09	J	ng/L		104	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	2.09	J	ng/L		104	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	1.95	J	ng/L		97	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	1.95	J	ng/L		97	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	91		70 - 130
13C2 PFHxA	97		70 - 130
13C2 PFDA	103		70 - 130
13C3-GenX	83		70 - 130

Lab Sample ID: 380-202871-B-1-A MS

Matrix: Water

Analysis Batch: 213274

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 213209

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		25.2	25.1		ng/L		100	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorooctanesulfonic acid (PFOS)	3.6		25.2	31.4		ng/L		111	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.2	26.2		ng/L		104	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.2	27.4		ng/L		109	70 - 130

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QC Sample Results

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

Job ID: 380-202572-1
SDG: Site H1 PFAS 533/537.1

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

Lab Sample ID: 380-202871-B-1-A MS

Matrix: Water

Analysis Batch: 213274

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 213209

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0	F1	25.2	35.0	F1	ng/L		139	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		25.2	27.5		ng/L		103	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		25.2	24.9		ng/L		99	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		25.2	27.5		ng/L		104	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		25.2	26.1		ng/L		104	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	3.9		25.2	31.4		ng/L		109	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.2	25.6		ng/L		100	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		25.2	28.3		ng/L		110	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		25.2	28.2		ng/L		112	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		25.2	23.9		ng/L		95	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.2	27.2		ng/L		108	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.2	26.8		ng/L		106	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.2	24.9		ng/L		99	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.2	27.0		ng/L		107	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
d5-NEtFOSAA	135	S1+	70 - 130						
13C2 PFHxA	109		70 - 130						
13C2 PFDA	103		70 - 130						
13C3-GenX	101		70 - 130						

Lab Sample ID: 380-202871-C-1-A MSD

Matrix: Water

Analysis Batch: 213274

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 213209

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	23.8		ng/L		95	70 - 130	6	30
Perfluorooctanesulfonic acid (PFOS)	3.6		25.1	29.3		ng/L		102	70 - 130	7	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	24.8		ng/L		99	70 - 130	5	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	25.6		ng/L		102	70 - 130	7	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0	F1	25.1	30.7		ng/L		122	70 - 130	13	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	26.9		ng/L		101	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	24.9		ng/L		99	70 - 130	0	30
Perfluorooctanoic acid (PFOA)	<2.0		25.1	27.6		ng/L		105	70 - 130	0	30
Perfluorodecanoic acid (PFDA)	<2.0		25.1	25.9		ng/L		103	70 - 130	1	30

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QC Sample Results

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

Job ID: 380-202572-1
SDG: Site H1 PFAS 533/537.1

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

Lab Sample ID: 380-202871-C-1-A MSD

Matrix: Water

Analysis Batch: 213274

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 213209

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	3.9		25.1	29.9		ng/L		103	70 - 130	5	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	23.3		ng/L		91	70 - 130	9	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	28.3		ng/L		110	70 - 130	0	30
Perfluorononanoic acid (PFNA)	<2.0		25.1	28.2		ng/L		112	70 - 130	0	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	21.6		ng/L		86	70 - 130	10	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	26.0		ng/L		104	70 - 130	4	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	25.5		ng/L		102	70 - 130	5	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	23.6		ng/L		94	70 - 130	6	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	25.5		ng/L		102	70 - 130	5	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
d5-NEtFOSAA	121		70 - 130								
13C2 PFHxA	106		70 - 130								
13C2 PFDA	105		70 - 130								
13C3-GenX	100		70 - 130								

QC Association Summary

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

Job ID: 380-202572-1
SDG: Site H1 PFAS 533/537.1

LCMS

Prep Batch: 213209

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-202572-1	BWS2253-H1-AQ	Total/NA	Water	537.1 DW	
380-202572-2	BWS2253-H1-FB	Total/NA	Water	537.1 DW	
MBL 380-213209/21-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-213209/23-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-213209/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-202871-B-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-202871-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 213274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-202572-1	BWS2253-H1-AQ	Total/NA	Water	EPA 537.1 V2	213209
380-202572-2	BWS2253-H1-FB	Total/NA	Water	EPA 537.1 V2	213209
MBL 380-213209/21-A	Method Blank	Total/NA	Water	EPA 537.1 V2	213209
LCS 380-213209/23-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	213209
MRL 380-213209/22-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	213209
380-202871-B-1-A MS	Matrix Spike	Total/NA	Water	EPA 537.1 V2	213209
380-202871-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	EPA 537.1 V2	213209

Prep Batch: 215077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-202572-1	BWS2253-H1-AQ	Total/NA	Water	533	
380-202572-2	BWS2253-H1-FB	Total/NA	Water	533	
MBL 380-215077/20-A	Method Blank	Total/NA	Water	533	
LCS 380-215077/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-215077/21-A	Lab Control Sample	Total/NA	Water	533	
380-202559-B-3-A MS	Matrix Spike	Total/NA	Water	533	
380-202559-C-3-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 215232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-202572-1	BWS2253-H1-AQ	Total/NA	Water	533	215077
380-202572-2	BWS2253-H1-FB	Total/NA	Water	533	215077
MBL 380-215077/20-A	Method Blank	Total/NA	Water	533	215077
LCS 380-215077/22-A	Lab Control Sample	Total/NA	Water	533	215077
MRL 380-215077/21-A	Lab Control Sample	Total/NA	Water	533	215077
380-202559-B-3-A MS	Matrix Spike	Total/NA	Water	533	215077
380-202559-C-3-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	215077

Lab Chronicle

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

Job ID: 380-202572-1
SDG: Site H1 PFAS 533/537.1

Client Sample ID: BWS2253-H1-AQ

Lab Sample ID: 380-202572-1

Date Collected: 03/10/26 09:15

Matrix: Water

Date Received: 03/11/26 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			215077	XTD8	EA POM	03/23/26 05:59
Total/NA	Analysis	533		1	215232	Y5FM	EA POM	03/24/26 02:14
Total/NA	Prep	537.1 DW			213209	E9PK	EA POM	03/14/26 06:43
Total/NA	Analysis	EPA 537.1 V2		1	213274	M7ML	EA POM	03/15/26 21:26

Client Sample ID: BWS2253-H1-FB

Lab Sample ID: 380-202572-2

Date Collected: 03/10/26 09:15

Matrix: Water

Date Received: 03/11/26 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			215077	XTD8	EA POM	03/23/26 05:59
Total/NA	Analysis	533		1	215232	Y5FM	EA POM	03/24/26 02:24
Total/NA	Prep	537.1 DW			213209	E9PK	EA POM	03/14/26 06:43
Total/NA	Analysis	EPA 537.1 V2		1	213274	M7ML	EA POM	03/15/26 21:35

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: 380-202572-1
SDG: Site H1 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	01-31-26 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Pomona

Method Summary

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

Job ID: 380-202572-1
SDG: Site H1 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: 380-202572-1
SDG: Site H1 PFAS 533/537.1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-202572-1	BWS2253-H1-AQ	Water	03/10/26 09:15	03/11/26 09:30	Hawaii
380-202572-2	BWS2253-H1-FB	Water	03/10/26 09:15	03/11/26 09:30	Hawaii

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- 15
- 16
- 17

Chain of Custody Record

[illegible]

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-202572-1
SDG Number: Site H1 PFAS 533/537.1

Login Number: 202572

List Number: 1

Creator: Gross, Drake

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").	N/A	
CIO4 headspace requirement met (>50% for CA, >30% for other states).	N/A	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	