

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

INTERA - Red-Hill-Incident
Site S1 PFAS 533/537.1

JOB NUMBER

380-225546-1

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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



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Definitions/Glossary

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

Job ID: 380-225546-1
SDG: Site S1 PFAS 533/537.1

Qualifiers

LCMS

Qualifier	Qualifier Description
E	Result exceeded calibration range.
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: 380-225546-1

Job ID: 380-225546-1

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Job Narrative 380-225546-1

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 7/16/2026 9:52 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 2.2°C.

PFAS

EPA 537.1 and EPA 533 are two distinct methods for the analysis of PFAS in drinking water. The analyses are conducted on differing instrumentation, with calibrations, extraction solvents and sample preservatives being dissimilar among the two methods. Therefore it is probable and not unexpected to see the methods having slight variations in analytical results: BWS2153-S1-AQ (380-225546-1). (XWB4)

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: 380-225546-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-AQ

Lab Sample ID: 380-225546-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	15		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.6		2.0	ng/L	1		533	Total/NA
Perfluorobutanoic acid (PFBA)	2.4		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	16		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	3.5		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.1		2.0	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: BWS2153-S1-FB

Lab Sample ID: 380-225546-2

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: 380-225546-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-AQ

Lab Sample ID: 380-225546-1

Date Collected: 07/15/26 11:15

Matrix: Water

Date Received: 07/16/26 09:52

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		07/20/26 08:05	07/21/26 08:49	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
Perfluorooctanesulfonic acid (PFOS)	15		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
Perfluorooctanoic acid (PFOA)	3.6		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
Perfluorobutanoic acid (PFBA)	2.4		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 08:49	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	108		50 - 200	07/20/26 08:05	07/21/26 08:49	1
13C6 PFDA	98		50 - 200	07/20/26 08:05	07/21/26 08:49	1
13C5 PFHxA	114		50 - 200	07/20/26 08:05	07/21/26 08:49	1
13C4 PFHpA	105		50 - 200	07/20/26 08:05	07/21/26 08:49	1
13C8 PFOA	108		50 - 200	07/20/26 08:05	07/21/26 08:49	1
13C9 PFNA	108		50 - 200	07/20/26 08:05	07/21/26 08:49	1
13C7 PFUnA	88		50 - 200	07/20/26 08:05	07/21/26 08:49	1
13C2 PFDoA	90		50 - 200	07/20/26 08:05	07/21/26 08:49	1
13C4 PFBA	106		50 - 200	07/20/26 08:05	07/21/26 08:49	1
13C5 PFPeA	113		50 - 200	07/20/26 08:05	07/21/26 08:49	1
13C3 PFBS	120		50 - 200	07/20/26 08:05	07/21/26 08:49	1
13C3 PFHxS	102		50 - 200	07/20/26 08:05	07/21/26 08:49	1
13C8 PFOS	106		50 - 200	07/20/26 08:05	07/21/26 08:49	1

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Client Sample Results

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

Job ID: 380-225546-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-AQ

Lab Sample ID: 380-225546-1

Date Collected: 07/15/26 11:15

Matrix: Water

Date Received: 07/16/26 09:52

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	144		50 - 200	07/20/26 08:05	07/21/26 08:49	1
13C2-6:2-FTS	124		50 - 200	07/20/26 08:05	07/21/26 08:49	1
13C2-8:2-FTS	99		50 - 200	07/20/26 08:05	07/21/26 08:49	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		07/19/26 07:02	07/20/26 16:28	1
Perfluorooctanesulfonic acid (PFOS)	16		2.0	ng/L		07/19/26 07:02	07/20/26 16:28	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:28	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:28	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:28	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:28	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:28	1
Perfluorooctanoic acid (PFOA)	3.5		2.0	ng/L		07/19/26 07:02	07/20/26 16:28	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:28	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:28	1
Perfluorobutanesulfonic acid (PFBS)	2.1		2.0	ng/L		07/19/26 07:02	07/20/26 16:28	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:28	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:28	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:28	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:28	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:28	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	97		70 - 130			07/19/26 07:02	07/20/26 16:28	1
13C2 PFHxA	107		70 - 130			07/19/26 07:02	07/20/26 16:28	1
13C2 PFDA	102		70 - 130			07/19/26 07:02	07/20/26 16:28	1
13C3-GenX	103		70 - 130			07/19/26 07:02	07/20/26 16:28	1

Client Sample ID: BWS2153-S1-FB

Lab Sample ID: 380-225546-2

Date Collected: 07/15/26 11:15

Matrix: Water

Date Received: 07/16/26 09:52

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		07/20/26 08:05	07/21/26 11:36	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1

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Client Sample Results

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

Job ID: 380-225546-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-FB

Lab Sample ID: 380-225546-2

Date Collected: 07/15/26 11:15

Matrix: Water

Date Received: 07/16/26 09:52

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/20/26 08:05	07/21/26 11:36	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	66		50 - 200	07/20/26 08:05	07/21/26 11:36	1
13C6 PFDA	50		50 - 200	07/20/26 08:05	07/21/26 11:36	1
13C5 PFHxA	68		50 - 200	07/20/26 08:05	07/21/26 11:36	1
13C4 PFHpA	64		50 - 200	07/20/26 08:05	07/21/26 11:36	1
13C8 PFOA	60		50 - 200	07/20/26 08:05	07/21/26 11:36	1
13C9 PFNA	56		50 - 200	07/20/26 08:05	07/21/26 11:36	1
13C7 PFUnA	56		50 - 200	07/20/26 08:05	07/21/26 11:36	1
13C2 PFDoA	62		50 - 200	07/20/26 08:05	07/21/26 11:36	1
13C4 PFBA	76		50 - 200	07/20/26 08:05	07/21/26 11:36	1
13C5 PFPeA	70		50 - 200	07/20/26 08:05	07/21/26 11:36	1
13C3 PFBS	102		50 - 200	07/20/26 08:05	07/21/26 11:36	1
13C3 PFHxS	105		50 - 200	07/20/26 08:05	07/21/26 11:36	1
13C8 PFOS	108		50 - 200	07/20/26 08:05	07/21/26 11:36	1
13C2-4:2-FTS	111		50 - 200	07/20/26 08:05	07/21/26 11:36	1
13C2-6:2-FTS	106		50 - 200	07/20/26 08:05	07/21/26 11:36	1
13C2-8:2-FTS	105		50 - 200	07/20/26 08:05	07/21/26 11:36	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		07/19/26 07:02	07/20/26 16:37	1

Eurofins Pomona

Client Sample Results

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

Job ID: 380-225546-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-FB

Lab Sample ID: 380-225546-2

Date Collected: 07/15/26 11:15

Matrix: Water

Date Received: 07/16/26 09:52

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:37	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:37	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:37	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:37	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:37	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:37	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:37	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:37	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:37	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:37	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:37	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:37	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:37	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:37	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:37	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:37	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/19/26 07:02	07/20/26 16:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	96		70 - 130			07/19/26 07:02	07/20/26 16:37	1
13C2 PFHxA	98		70 - 130			07/19/26 07:02	07/20/26 16:37	1
13C2 PFDA	100		70 - 130			07/19/26 07:02	07/20/26 16:37	1
13C3-GenX	93		70 - 130			07/19/26 07:02	07/20/26 16:37	1

Action Limit Summary

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

Job ID: 380-225546-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-AQ

Lab Sample ID: 380-225546-1

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	15		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	3.6		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)	16		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	3.5		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: BWS2153-S1-FB

Lab Sample ID: 380-225546-2

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	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: 380-225546-1
SDG: Site S1 PFAS 533/537.1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-225540-E-1-A MS	Matrix Spike	106	110	103	106
380-225540-F-1-A MSD	Matrix Spike Duplicate	107	104	109	107
380-225546-1	BWS2153-S1-AQ	97	107	102	103
380-225546-2	BWS2153-S1-FB	96	98	100	93
LCS 380-240750/23-A	Lab Control Sample	100	105	98	100
MBL 380-240750/21-A	Method Blank	108	107	108	100
MRL 380-240750/22-A	Lab Control Sample	97	96	99	89

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: 380-225546-1
SDG: Site S1 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)
380-225546-1	BWS2153-S1-AQ	108	98	114	105	108	108	88	90
380-225546-1 MS	BWS2153-S1-AQ	68	85	74	74	80	87	82	91
380-225546-1 MSD	BWS2153-S1-AQ	90	91	99	94	97	100	87	97
380-225546-2	BWS2153-S1-FB	66	50	68	64	60	56	56	62
LCS 380-240909/22-A	Lab Control Sample	115	107	114	116	115	120	113	116
MBL 380-240909/20-A	Method Blank	105	103	106	112	111	112	111	118
MRL 380-240909/21-A	Lab Control Sample	110	105	109	112	110	104	110	108

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-225546-1	BWS2153-S1-AQ	106	113	120	102	106	144	124	99
380-225546-1 MS	BWS2153-S1-AQ	74	77	119	95	109	134	120	105
380-225546-1 MSD	BWS2153-S1-AQ	95	101	124	103	113	144	129	107
380-225546-2	BWS2153-S1-FB	76	70	102	105	108	111	106	105
LCS 380-240909/22-A	Lab Control Sample	114	119	112	116	115	111	110	114
MBL 380-240909/20-A	Method Blank	112	110	110	113	113	118	120	114
MRL 380-240909/21-A	Lab Control Sample	107	109	112	119	113	115	115	110

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: 380-225546-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: MBL 380-240909/20-A

Matrix: Water

Analysis Batch: 241160

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 240909

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.29		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.59		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<0.99		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
Perfluorobutanesulfonic acid (PFBS)	<0.36		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
Perfluorododecanoic acid (PFDoA)	<0.53		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
Perfluoroheptanoic acid (PFHpA)	<0.38		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
Perfluorohexanoic acid (PFHxA)	<0.45		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
Perfluorononanoic acid (PFNA)	<0.39		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
Perfluorooctanesulfonic acid (PFOS)	<0.42		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
Perfluorooctanoic acid (PFOA)	<0.37		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
Perfluoroundecanoic acid (PFUnA)	<0.41		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
Perfluorobutanoic acid (PFBA)	<0.68		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.36		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.47		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.46		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.24		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.45		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
Perfluoropentanoic acid (PFPeA)	<0.37		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.35		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1
Perfluoropentanesulfonic acid (PFPeS)	<0.38		2.0	ng/L		07/20/26 08:05	07/21/26 08:19	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	105		50 - 200	07/20/26 08:05	07/21/26 08:19	1
13C6 PFDA	103		50 - 200	07/20/26 08:05	07/21/26 08:19	1
13C5 PFHxA	106		50 - 200	07/20/26 08:05	07/21/26 08:19	1
13C4 PFHpA	112		50 - 200	07/20/26 08:05	07/21/26 08:19	1
13C8 PFOA	111		50 - 200	07/20/26 08:05	07/21/26 08:19	1
13C9 PFNA	112		50 - 200	07/20/26 08:05	07/21/26 08:19	1
13C7 PFUnA	111		50 - 200	07/20/26 08:05	07/21/26 08:19	1
13C2 PFDoA	118		50 - 200	07/20/26 08:05	07/21/26 08:19	1
13C4 PFBA	112		50 - 200	07/20/26 08:05	07/21/26 08:19	1
13C5 PFPeA	110		50 - 200	07/20/26 08:05	07/21/26 08:19	1
13C3 PFBS	110		50 - 200	07/20/26 08:05	07/21/26 08:19	1
13C3 PFHxS	113		50 - 200	07/20/26 08:05	07/21/26 08:19	1

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QC Sample Results

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

Job ID: 380-225546-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: MBL 380-240909/20-A

Matrix: Water

Analysis Batch: 241160

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 240909

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	113		50 - 200	07/20/26 08:05	07/21/26 08:19	1
13C2-4:2-FTS	118		50 - 200	07/20/26 08:05	07/21/26 08:19	1
13C2-6:2-FTS	120		50 - 200	07/20/26 08:05	07/21/26 08:19	1
13C2-8:2-FTS	114		50 - 200	07/20/26 08:05	07/21/26 08:19	1

Lab Sample ID: LCS 380-240909/22-A

Matrix: Water

Analysis Batch: 241160

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 240909

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	59.1	52.8		ng/L		89	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	59.1	54.0		ng/L		91	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	59.1	55.7		ng/L		94	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	59.1	55.9		ng/L		95	70 - 130
Perfluorobutanesulfonic acid (PFBS)	59.1	55.8		ng/L		95	70 - 130
Perfluorodecanoic acid (PFDA)	59.1	58.6		ng/L		99	70 - 130
Perfluorododecanoic acid (PFDaA)	59.1	54.0		ng/L		91	70 - 130
Perfluoroheptanoic acid (PFHpA)	59.1	56.3		ng/L		95	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	59.1	54.3		ng/L		92	70 - 130
Perfluorohexanoic acid (PFHxA)	59.1	56.6		ng/L		96	70 - 130
Perfluorononanoic acid (PFNA)	59.1	50.6		ng/L		86	70 - 130
Perfluorooctanesulfonic acid (PFOS)	59.1	53.3		ng/L		90	70 - 130
Perfluorooctanoic acid (PFOA)	59.1	55.1		ng/L		93	70 - 130
Perfluoroundecanoic acid (PFUnA)	59.1	55.8		ng/L		95	70 - 130
Perfluorobutanoic acid (PFBA)	59.1	56.9		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	59.1	56.0		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	59.1	57.0		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	59.1	57.8		ng/L		98	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	59.1	60.0		ng/L		102	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	59.1	54.5		ng/L		92	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	59.1	54.9		ng/L		93	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	59.1	55.1		ng/L		93	70 - 130
Perfluoropentanoic acid (PFPeA)	59.1	56.3		ng/L		95	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	59.1	55.1		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: 380-225546-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: LCS 380-240909/22-A

Matrix: Water

Analysis Batch: 241160

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 240909

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	59.1	53.5		ng/L		91	70 - 130
LCS LCS							
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	115		50 - 200				
13C6 PFDA	107		50 - 200				
13C5 PFHxA	114		50 - 200				
13C4 PFHpA	116		50 - 200				
13C8 PFOA	115		50 - 200				
13C9 PFNA	120		50 - 200				
13C7 PFUnA	113		50 - 200				
13C2 PFDoA	116		50 - 200				
13C4 PFBA	114		50 - 200				
13C5 PFPeA	119		50 - 200				
13C3 PFBS	112		50 - 200				
13C3 PFHxS	116		50 - 200				
13C8 PFOS	115		50 - 200				
13C2-4:2-FTS	111		50 - 200				
13C2-6:2-FTS	110		50 - 200				
13C2-8:2-FTS	114		50 - 200				

Lab Sample ID: MRL 380-240909/21-A

Matrix: Water

Analysis Batch: 241160

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 240909

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.97	1.97	J	ng/L		100	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	1.97	1.95	J	ng/L		99	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.97	2.03	J	ng/L		103	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.97	2.00	J	ng/L		102	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.97	2.05	J	ng/L		104	50 - 150
Perfluorodecanoic acid (PFDA)	1.97	2.05	J	ng/L		104	50 - 150
Perfluorododecanoic acid (PFDoA)	1.97	2.06	J	ng/L		104	50 - 150
Perfluoroheptanoic acid (PFHpA)	1.97	2.01	J	ng/L		102	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.97	1.84	J	ng/L		93	50 - 150
Perfluorohexanoic acid (PFHxA)	1.97	2.06	J	ng/L		105	50 - 150
Perfluorononanoic acid (PFNA)	1.97	2.13	J	ng/L		108	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.97	1.93	J	ng/L		98	50 - 150
Perfluorooctanoic acid (PFOA)	1.97	2.04	J	ng/L		103	50 - 150
Perfluoroundecanoic acid (PFUnA)	1.97	1.97	J	ng/L		100	50 - 150
Perfluorobutanoic acid (PFBA)	1.97	2.30	J	ng/L		117	50 - 150

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QC Sample Results

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

Job ID: 380-225546-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: MRL 380-240909/21-A

Matrix: Water

Analysis Batch: 241160

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 240909

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.97	2.14	J	ng/L		109	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.97	2.23	J	ng/L		113	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.97	2.07	J	ng/L		105	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1.97	2.06	J	ng/L		104	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	1.97	1.94	J	ng/L		98	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	1.97	2.15	J	ng/L		109	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	1.97	2.01	J	ng/L		102	50 - 150
Perfluoropentanoic acid (PFPeA)	1.97	2.21	J	ng/L		112	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	1.97	1.91	J	ng/L		97	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	1.97	1.95	J	ng/L		99	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	110		50 - 200
13C6 PFDA	105		50 - 200
13C5 PFHxA	109		50 - 200
13C4 PFHpA	112		50 - 200
13C8 PFOA	110		50 - 200
13C9 PFNA	104		50 - 200
13C7 PFUnA	110		50 - 200
13C2 PFDoA	108		50 - 200
13C4 PFBA	107		50 - 200
13C5 PFPeA	109		50 - 200
13C3 PFBS	112		50 - 200
13C3 PFHxS	119		50 - 200
13C8 PFOS	113		50 - 200
13C2-4:2-FTS	115		50 - 200
13C2-6:2-FTS	115		50 - 200
13C2-8:2-FTS	110		50 - 200

Lab Sample ID: 380-225546-1 MS

Matrix: Water

Analysis Batch: 241160

Client Sample ID: BWS2153-S1-AQ

Prep Type: Total/NA

Prep Batch: 240909

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		59.2	52.0		ng/L		88	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		59.2	59.1		ng/L		100	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		59.2	53.7		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: 380-225546-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: 380-225546-1 MS

Matrix: Water

Analysis Batch: 241160

Client Sample ID: BWS2153-S1-AQ

Prep Type: Total/NA

Prep Batch: 240909

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		59.2	58.1		ng/L		98	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		59.2	59.7		ng/L		98	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		59.2	61.3		ng/L		103	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		59.2	57.1		ng/L		96	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		59.2	58.7		ng/L		98	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		59.2	65.8		ng/L		109	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		59.2	62.5		ng/L		104	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		59.2	56.7		ng/L		95	70 - 130
Perfluorooctanesulfonic acid (PFOS)	15		59.2	71.9		ng/L		95	70 - 130
Perfluorooctanoic acid (PFOA)	3.6		59.2	61.1		ng/L		97	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		59.2	56.4		ng/L		95	70 - 130
Perfluorobutanoic acid (PFBA)	2.4		59.2	61.9		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		59.2	58.4		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		59.2	56.2		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		59.2	63.1		ng/L		107	70 - 130
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		59.2	53.1		ng/L		90	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		59.2	54.3		ng/L		92	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		59.2	56.3		ng/L		95	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		59.2	58.0		ng/L		98	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		59.2	59.6		ng/L		99	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		59.2	63.1		ng/L		107	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		59.2	74.0		ng/L		125	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C3 HFPO-DA	68		50 - 200
13C6 PFDA	85		50 - 200
13C5 PFHxA	74		50 - 200
13C4 PFHpA	74		50 - 200
13C8 PFOA	80		50 - 200
13C9 PFNA	87		50 - 200
13C7 PFUnA	82		50 - 200
13C2 PFDoA	91		50 - 200
13C4 PFBA	74		50 - 200
13C5 PFPeA	77		50 - 200
13C3 PFBS	119		50 - 200
13C3 PFHxS	95		50 - 200
13C8 PFOS	109		50 - 200

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QC Sample Results

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

Job ID: 380-225546-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: 380-225546-1 MS

Matrix: Water

Analysis Batch: 241160

Client Sample ID: BWS2153-S1-AQ

Prep Type: Total/NA

Prep Batch: 240909

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	134		50 - 200
13C2-6:2-FTS	120		50 - 200
13C2-8:2-FTS	105		50 - 200

Lab Sample ID: 380-225546-1 MSD

Matrix: Water

Analysis Batch: 241160

Client Sample ID: BWS2153-S1-AQ

Prep Type: Total/NA

Prep Batch: 240909

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		59.2	50.4		ng/L		85	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		59.2	57.7		ng/L		97	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		59.2	55.4		ng/L		94	70 - 130	3	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		59.2	57.8		ng/L		98	70 - 130	0	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		59.2	57.8		ng/L		95	70 - 130	3	30
Perfluorodecanoic acid (PFDA)	<2.0		59.2	62.2		ng/L		104	70 - 130	1	30
Perfluorododecanoic acid (PFDaA)	<2.0		59.2	57.5		ng/L		97	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		59.2	57.7		ng/L		97	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		59.2	60.9		ng/L		101	70 - 130	8	30
Perfluorohexanoic acid (PFHxA)	<2.0		59.2	59.3		ng/L		99	70 - 130	5	30
Perfluorononanoic acid (PFNA)	<2.0		59.2	55.9		ng/L		94	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	15		59.2	69.9		ng/L		92	70 - 130	3	30
Perfluorooctanoic acid (PFOA)	3.6		59.2	58.9		ng/L		94	70 - 130	4	30
Perfluoroundecanoic acid (PFUnA)	<2.0		59.2	56.4		ng/L		95	70 - 130	0	30
Perfluorobutanoic acid (PFBA)	2.4		59.2	60.5		ng/L		98	70 - 130	2	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		59.2	61.2		ng/L		103	70 - 130	5	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		59.2	55.3		ng/L		93	70 - 130	2	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		59.2	59.3		ng/L		100	70 - 130	6	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		59.2	53.4		ng/L		90	70 - 130	1	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		59.2	53.0		ng/L		90	70 - 130	2	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		59.2	51.3		ng/L		87	70 - 130	9	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		59.2	54.7		ng/L		92	70 - 130	6	30
Perfluoropentanoic acid (PFPeA)	<2.0		59.2	57.5		ng/L		96	70 - 130	4	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		59.2	60.0		ng/L		101	70 - 130	5	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		59.2	68.2		ng/L		115	70 - 130	8	30

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QC Sample Results

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

Job ID: 380-225546-1
SDG: Site S1 PFAS 533/537.1

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

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C3 HFPO-DA	90		50 - 200
13C6 PFDA	91		50 - 200
13C5 PFHxA	99		50 - 200
13C4 PFHpA	94		50 - 200
13C8 PFOA	97		50 - 200
13C9 PFNA	100		50 - 200
13C7 PFUnA	87		50 - 200
13C2 PFDoA	97		50 - 200
13C4 PFBA	95		50 - 200
13C5 PFPeA	101		50 - 200
13C3 PFBS	124		50 - 200
13C3 PFHxS	103		50 - 200
13C8 PFOS	113		50 - 200
13C2-4:2-FTS	144		50 - 200
13C2-6:2-FTS	129		50 - 200
13C2-8:2-FTS	107		50 - 200

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

Lab Sample ID: MBL 380-240750/21-A
Matrix: Water
Analysis Batch: 240980

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240750

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		07/19/26 07:02	07/20/26 14:59	1
Perfluorooctanesulfonic acid (PFOS)	<0.42		2.0	ng/L		07/19/26 07:02	07/20/26 14:59	1
Perfluoroundecanoic acid (PFUnA)	<0.41		2.0	ng/L		07/19/26 07:02	07/20/26 14:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.57		2.0	ng/L		07/19/26 07:02	07/20/26 14:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.41		2.0	ng/L		07/19/26 07:02	07/20/26 14:59	1
Perfluorohexanoic acid (PFHxA)	<0.45		2.0	ng/L		07/19/26 07:02	07/20/26 14:59	1
Perfluorododecanoic acid (PFDoA)	<0.53		2.0	ng/L		07/19/26 07:02	07/20/26 14:59	1
Perfluorooctanoic acid (PFOA)	<0.37		2.0	ng/L		07/19/26 07:02	07/20/26 14:59	1
Perfluorodecanoic acid (PFDA)	<0.30		2.0	ng/L		07/19/26 07:02	07/20/26 14:59	1
Perfluorohexanesulfonic acid (PFHxS)	<0.31		2.0	ng/L		07/19/26 07:02	07/20/26 14:59	1
Perfluorobutanesulfonic acid (PFBS)	<0.36		2.0	ng/L		07/19/26 07:02	07/20/26 14:59	1
Perfluoroheptanoic acid (PFHpA)	<0.38		2.0	ng/L		07/19/26 07:02	07/20/26 14:59	1
Perfluorononanoic acid (PFNA)	<0.39		2.0	ng/L		07/19/26 07:02	07/20/26 14:59	1
Perfluorotetradecanoic acid (PFTA)	<0.53		2.0	ng/L		07/19/26 07:02	07/20/26 14:59	1
Perfluorotridecanoic acid (PFTrDA)	<0.35		2.0	ng/L		07/19/26 07:02	07/20/26 14:59	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.29		2.0	ng/L		07/19/26 07:02	07/20/26 14:59	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.29		2.0	ng/L		07/19/26 07:02	07/20/26 14:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.59		2.0	ng/L		07/19/26 07:02	07/20/26 14:59	1
Surrogate	MBL %Recovery	MBL Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	108		70 - 130			07/19/26 07:02	07/20/26 14:59	1
13C2 PFHxA	107		70 - 130			07/19/26 07:02	07/20/26 14:59	1
13C2 PFDA	108		70 - 130			07/19/26 07:02	07/20/26 14:59	1

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QC Sample Results

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

Job ID: 380-225546-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: MBL 380-240750/21-A

Matrix: Water

Analysis Batch: 240980

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 240750

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-GenX	100		70 - 130	07/19/26 07:02	07/20/26 14:59	1

Lab Sample ID: LCS 380-240750/23-A

Matrix: Water

Analysis Batch: 240980

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 240750

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	24.6	24.0		ng/L		98	70 - 130
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	24.6	25.3		ng/L		103	70 - 130
Perfluoroundecanoic acid (PFUnA)	24.6	24.2		ng/L		98	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	24.6	25.3		ng/L		103	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	24.6	23.8		ng/L		97	70 - 130
Perfluorohexanoic acid (PFHxA)	24.6	24.8		ng/L		101	70 - 130
Perfluorododecanoic acid (PFDoA)	24.6	24.2		ng/L		99	70 - 130
Perfluorooctanoic acid (PFOA)	24.6	25.2		ng/L		103	70 - 130
Perfluorodecanoic acid (PFDA)	24.6	24.3		ng/L		99	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	24.6	25.7		ng/L		105	70 - 130
Perfluorobutanesulfonic acid (PFBS)	24.6	24.6		ng/L		100	70 - 130
Perfluoroheptanoic acid (PFHpA)	24.6	26.2		ng/L		107	70 - 130
Perfluorononanoic acid (PFNA)	24.6	25.8		ng/L		105	70 - 130
Perfluorotetradecanoic acid (PFTA)	24.6	22.0		ng/L		90	70 - 130
Perfluorotridecanoic acid (PFTrDA)	24.6	26.1		ng/L		106	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	24.6	23.7		ng/L		96	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	24.6	24.1		ng/L		98	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	24.6	25.4		ng/L		104	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	100		70 - 130
13C2 PFHxA	105		70 - 130
13C2 PFDA	98		70 - 130
13C3-GenX	100		70 - 130

QC Sample Results

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

Job ID: 380-225546-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: MRL 380-240750/22-A

Matrix: Water

Analysis Batch: 240980

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 240750

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	1.96	1.72	J	ng/L		87	50 - 150
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	1.96	2.02	J	ng/L		103	50 - 150
Perfluoroundecanoic acid (PFUnA)	1.96	2.01	J	ng/L		102	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.96	1.84	J	ng/L		94	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.96	1.77	J	ng/L		90	50 - 150
Perfluorohexanoic acid (PFHxA)	1.96	1.85	J	ng/L		94	50 - 150
Perfluorododecanoic acid (PFDoA)	1.96	1.99	J	ng/L		102	50 - 150
Perfluorooctanoic acid (PFOA)	1.96	1.99	J	ng/L		101	50 - 150
Perfluorodecanoic acid (PFDA)	1.96	1.94	J	ng/L		98	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.96	2.01	J	ng/L		102	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.96	1.93	J	ng/L		98	50 - 150
Perfluoroheptanoic acid (PFHpA)	1.96	2.00	J	ng/L		102	50 - 150
Perfluorononanoic acid (PFNA)	1.96	2.13	J	ng/L		108	50 - 150
Perfluorotetradecanoic acid (PFTA)	1.96	1.95	J	ng/L		99	50 - 150
Perfluorotridecanoic acid (PFTrDA)	1.96	2.12	J	ng/L		108	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	1.96	1.89	J	ng/L		96	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.96	1.90	J	ng/L		97	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.96	1.83	J	ng/L		93	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	97		70 - 130
13C2 PFHxA	96		70 - 130
13C2 PFDA	99		70 - 130
13C3-GenX	89		70 - 130

Lab Sample ID: 380-225540-E-1-A MS

Matrix: Water

Analysis Batch: 240980

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 240750

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		49.3	46.9		ng/L		95	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorooctanesulfonic acid (PFOS)	13		49.3	63.1		ng/L		101	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		49.3	46.6		ng/L		94	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		49.3	49.5		ng/L		100	70 - 130

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QC Sample Results

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

Job ID: 380-225546-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: 380-225540-E-1-A MS

Matrix: Water

Analysis Batch: 240980

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 240750

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		49.3	48.3		ng/L		98	70 - 130
Perfluorohexanoic acid (PFHxA)	12		49.3	56.2		ng/L		89	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		49.3	48.6		ng/L		99	70 - 130
Perfluorooctanoic acid (PFOA)	16		49.3	63.1		ng/L		96	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		49.3	49.1		ng/L		99	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	10		49.3	58.6		ng/L		98	70 - 130
Perfluorobutanesulfonic acid (PFBS)	54		49.3	103	E	ng/L		100	70 - 130
Perfluoroheptanoic acid (PFHpA)	6.6		49.3	52.2		ng/L		92	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		49.3	49.1		ng/L		97	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		49.3	44.2		ng/L		90	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		49.3	52.1		ng/L		106	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		49.3	49.3		ng/L		100	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		49.3	48.5		ng/L		98	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		49.3	46.8		ng/L		95	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
d5-NEtFOSAA	106		70 - 130						
13C2 PFHxA	110		70 - 130						
13C2 PFDA	103		70 - 130						
13C3-GenX	106		70 - 130						

Lab Sample ID: 380-225540-F-1-A MSD

Matrix: Water

Analysis Batch: 240980

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 240750

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		49.4	48.2		ng/L		98	70 - 130	3	30
Perfluorooctanesulfonic acid (PFOS)	13		49.4	62.6		ng/L		100	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		49.4	50.9		ng/L		103	70 - 130	9	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		49.4	51.1		ng/L		103	70 - 130	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		49.4	50.1		ng/L		101	70 - 130	4	30
Perfluorohexanoic acid (PFHxA)	12		49.4	59.1		ng/L		94	70 - 130	5	30
Perfluorododecanoic acid (PFDoA)	<2.0		49.4	49.5		ng/L		100	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	16		49.4	63.6		ng/L		97	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		49.4	50.0		ng/L		100	70 - 130	2	30

Eurofins Pomona

QC Sample Results

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

Job ID: 380-225546-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: 380-225540-F-1-A MSD

Matrix: Water

Analysis Batch: 240980

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 240750

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	10		49.4	59.5		ng/L		99	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	54		49.4	101	E	ng/L		96	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	6.6		49.4	55.7		ng/L		99	70 - 130	7	30
Perfluorononanoic acid (PFNA)	<2.0		49.4	51.9		ng/L		102	70 - 130	5	30
Perfluorotetradecanoic acid (PFTA)	<2.0		49.4	45.9		ng/L		93	70 - 130	4	30
Perfluorotridecanoic acid (PFTTrDA)	<2.0		49.4	53.2		ng/L		108	70 - 130	2	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		49.4	48.4		ng/L		98	70 - 130	2	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		49.4	48.5		ng/L		98	70 - 130	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		49.4	48.5		ng/L		98	70 - 130	4	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
d5-NEtFOSAA	107		70 - 130								
13C2 PFHxA	104		70 - 130								
13C2 PFDA	109		70 - 130								
13C3-GenX	107		70 - 130								

QC Association Summary

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

Job ID: 380-225546-1
SDG: Site S1 PFAS 533/537.1

LCMS

Prep Batch: 240750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-225546-1	BWS2153-S1-AQ	Total/NA	Water	537.1 DW	
380-225546-2	BWS2153-S1-FB	Total/NA	Water	537.1 DW	
MBL 380-240750/21-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-240750/23-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-240750/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-225540-E-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-225540-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Prep Batch: 240909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-225546-1	BWS2153-S1-AQ	Total/NA	Water	533	
380-225546-2	BWS2153-S1-FB	Total/NA	Water	533	
MBL 380-240909/20-A	Method Blank	Total/NA	Water	533	
LCS 380-240909/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-240909/21-A	Lab Control Sample	Total/NA	Water	533	
380-225546-1 MS	BWS2153-S1-AQ	Total/NA	Water	533	
380-225546-1 MSD	BWS2153-S1-AQ	Total/NA	Water	533	

Analysis Batch: 240980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-225546-1	BWS2153-S1-AQ	Total/NA	Water	EPA 537.1 V2	240750
380-225546-2	BWS2153-S1-FB	Total/NA	Water	EPA 537.1 V2	240750
MBL 380-240750/21-A	Method Blank	Total/NA	Water	EPA 537.1 V2	240750
LCS 380-240750/23-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	240750
MRL 380-240750/22-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	240750
380-225540-E-1-A MS	Matrix Spike	Total/NA	Water	EPA 537.1 V2	240750
380-225540-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	EPA 537.1 V2	240750

Analysis Batch: 241160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-225546-1	BWS2153-S1-AQ	Total/NA	Water	533	240909
380-225546-2	BWS2153-S1-FB	Total/NA	Water	533	240909
MBL 380-240909/20-A	Method Blank	Total/NA	Water	533	240909
LCS 380-240909/22-A	Lab Control Sample	Total/NA	Water	533	240909
MRL 380-240909/21-A	Lab Control Sample	Total/NA	Water	533	240909
380-225546-1 MS	BWS2153-S1-AQ	Total/NA	Water	533	240909
380-225546-1 MSD	BWS2153-S1-AQ	Total/NA	Water	533	240909

Lab Chronicle

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

Job ID: 380-225546-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-AQ

Lab Sample ID: 380-225546-1

Date Collected: 07/15/26 11:15

Matrix: Water

Date Received: 07/16/26 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			240909	XTD8	EA POM	07/20/26 08:05
Total/NA	Analysis	533		1	241160	SZ9R	EA POM	07/21/26 08:49
Total/NA	Prep	537.1 DW			240750	E9PK	EA POM	07/19/26 07:02
Total/NA	Analysis	EPA 537.1 V2		1	240980	SZ9R	EA POM	07/20/26 16:28

Client Sample ID: BWS2153-S1-FB

Lab Sample ID: 380-225546-2

Date Collected: 07/15/26 11:15

Matrix: Water

Date Received: 07/16/26 09:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			240909	XTD8	EA POM	07/20/26 08:05
Total/NA	Analysis	533		1	241160	SZ9R	EA POM	07/21/26 11:36
Total/NA	Prep	537.1 DW			240750	E9PK	EA POM	07/19/26 07:02
Total/NA	Analysis	EPA 537.1 V2		1	240980	SZ9R	EA POM	07/20/26 16:37

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: 380-225546-1
SDG: Site S1 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.

Method Summary

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

Job ID: 380-225546-1
SDG: Site S1 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: 380-225546-1
SDG: Site S1 PFAS 533/537.1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-225546-1	BWS2153-S1-AQ	Water	07/15/26 11:15	07/16/26 09:52	Hawaii
380-225546-2	BWS2153-S1-FB	Water	07/15/26 11:15	07/16/26 09:52	Hawaii

Chain of Custody Record



380-225546 COC

[illegible]

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-225546-1
SDG Number: Site S1 PFAS 533/537.1

Login Number: 225546

List Number: 1

Creator: Edrosa, Rey

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	