

ANALYTICAL REPORT

PREPARED FOR

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City & County of Honolulu
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Generated 6/12/2026 4:20:00 PM

JOB DESCRIPTION

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

JOB NUMBER

380-218017-1

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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: 380-218017-1
SDG: Site S1 PFAS 533/537.1

Qualifiers

LCMS

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

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

Job ID: 380-218017-1

Job ID: 380-218017-1

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Job Narrative 380-218017-1

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 6/4/2026 9:35 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 4.3°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 (380-218017-1). (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: 380-218017-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-AQ

Lab Sample ID: 380-218017-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	13		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.4		2.0	ng/L	1		533	Total/NA
Perfluorobutanoic acid (PFBA)	2.1		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	17		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	3.9		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.9		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.7		2.0	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: BWS2153-S1-FB

Lab Sample ID: 380-218017-2

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: 380-218017-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-AQ

Lab Sample ID: 380-218017-1

Date Collected: 06/03/26 08:30

Matrix: Water

Date Received: 06/04/26 09:35

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 (11CI-PF3OUdS)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
Perfluorooctanesulfonic acid (PFOS)	13		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
Perfluorooctanoic acid (PFOA)	3.4		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
Perfluorobutanoic acid (PFBA)	2.1		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 12:42	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	121		50 - 200	06/07/26 15:06	06/08/26 12:42	1
13C6 PFDA	100		50 - 200	06/07/26 15:06	06/08/26 12:42	1
13C5 PFHxA	132		50 - 200	06/07/26 15:06	06/08/26 12:42	1
13C4 PFHpA	116		50 - 200	06/07/26 15:06	06/08/26 12:42	1
13C8 PFOA	127		50 - 200	06/07/26 15:06	06/08/26 12:42	1
13C9 PFNA	108		50 - 200	06/07/26 15:06	06/08/26 12:42	1
13C7 PFUnA	73		50 - 200	06/07/26 15:06	06/08/26 12:42	1
13C2 PFDoA	108		50 - 200	06/07/26 15:06	06/08/26 12:42	1
13C4 PFBA	124		50 - 200	06/07/26 15:06	06/08/26 12:42	1
13C5 PFPeA	130		50 - 200	06/07/26 15:06	06/08/26 12:42	1
13C3 PFBS	173		50 - 200	06/07/26 15:06	06/08/26 12:42	1
13C3 PFHxS	147		50 - 200	06/07/26 15:06	06/08/26 12:42	1
13C8 PFOS	147		50 - 200	06/07/26 15:06	06/08/26 12:42	1

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Client Sample Results

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

Job ID: 380-218017-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-AQ

Lab Sample ID: 380-218017-1

Date Collected: 06/03/26 08:30

Matrix: Water

Date Received: 06/04/26 09:35

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	190		50 - 200	06/07/26 15:06	06/08/26 12:42	1
13C2-6:2-FTS	176		50 - 200	06/07/26 15:06	06/08/26 12:42	1
13C2-8:2-FTS	124		50 - 200	06/07/26 15:06	06/08/26 12:42	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		06/05/26 09:00	06/06/26 10:52	1
Perfluorooctanesulfonic acid (PFOS)	17		2.0	ng/L		06/05/26 09:00	06/06/26 10:52	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/05/26 09:00	06/06/26 10:52	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		06/05/26 09:00	06/06/26 10:52	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		06/05/26 09:00	06/06/26 10:52	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/05/26 09:00	06/06/26 10:52	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/05/26 09:00	06/06/26 10:52	1
Perfluorooctanoic acid (PFOA)	3.9		2.0	ng/L		06/05/26 09:00	06/06/26 10:52	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/05/26 09:00	06/06/26 10:52	1
Perfluorohexanesulfonic acid (PFHxS)	2.9		2.0	ng/L		06/05/26 09:00	06/06/26 10:52	1
Perfluorobutanesulfonic acid (PFBS)	2.7		2.0	ng/L		06/05/26 09:00	06/06/26 10:52	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/05/26 09:00	06/06/26 10:52	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/05/26 09:00	06/06/26 10:52	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		06/05/26 09:00	06/06/26 10:52	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		06/05/26 09:00	06/06/26 10:52	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/05/26 09:00	06/06/26 10:52	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		06/05/26 09:00	06/06/26 10:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/05/26 09:00	06/06/26 10:52	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	70		70 - 130			06/05/26 09:00	06/06/26 10:52	1
13C2 PFHxA	112		70 - 130			06/05/26 09:00	06/06/26 10:52	1
13C2 PFDA	92		70 - 130			06/05/26 09:00	06/06/26 10:52	1
13C3-GenX	107		70 - 130			06/05/26 09:00	06/06/26 10:52	1

Client Sample ID: BWS2153-S1-FB

Lab Sample ID: 380-218017-2

Date Collected: 06/03/26 08:30

Matrix: Water

Date Received: 06/04/26 09:35

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		06/07/26 15:06	06/08/26 11:45	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1

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Client Sample Results

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

Job ID: 380-218017-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-FB

Lab Sample ID: 380-218017-2

Date Collected: 06/03/26 08:30

Matrix: Water

Date Received: 06/04/26 09:35

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		06/07/26 15:06	06/08/26 11:45	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		06/07/26 15:06	06/08/26 11:45	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	81		50 - 200	06/07/26 15:06	06/08/26 11:45	1
13C6 PFDA	70		50 - 200	06/07/26 15:06	06/08/26 11:45	1
13C5 PFHxA	93		50 - 200	06/07/26 15:06	06/08/26 11:45	1
13C4 PFHpA	89		50 - 200	06/07/26 15:06	06/08/26 11:45	1
13C8 PFOA	89		50 - 200	06/07/26 15:06	06/08/26 11:45	1
13C9 PFNA	82		50 - 200	06/07/26 15:06	06/08/26 11:45	1
13C7 PFUnA	68		50 - 200	06/07/26 15:06	06/08/26 11:45	1
13C2 PFDoA	67		50 - 200	06/07/26 15:06	06/08/26 11:45	1
13C4 PFBA	103		50 - 200	06/07/26 15:06	06/08/26 11:45	1
13C5 PFPeA	98		50 - 200	06/07/26 15:06	06/08/26 11:45	1
13C3 PFBS	113		50 - 200	06/07/26 15:06	06/08/26 11:45	1
13C3 PFHxS	121		50 - 200	06/07/26 15:06	06/08/26 11:45	1
13C8 PFOS	121		50 - 200	06/07/26 15:06	06/08/26 11:45	1
13C2-4:2-FTS	135		50 - 200	06/07/26 15:06	06/08/26 11:45	1
13C2-6:2-FTS	127		50 - 200	06/07/26 15:06	06/08/26 11:45	1
13C2-8:2-FTS	129		50 - 200	06/07/26 15:06	06/08/26 11:45	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		06/05/26 09:00	06/05/26 21:28	1

Eurofins Pomona

Client Sample Results

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

Job ID: 380-218017-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-FB

Lab Sample ID: 380-218017-2

Date Collected: 06/03/26 08:30

Matrix: Water

Date Received: 06/04/26 09:35

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		06/05/26 09:00	06/05/26 21:28	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/05/26 09:00	06/05/26 21:28	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		06/05/26 09:00	06/05/26 21:28	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		06/05/26 09:00	06/05/26 21:28	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/05/26 09:00	06/05/26 21:28	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/05/26 09:00	06/05/26 21:28	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/05/26 09:00	06/05/26 21:28	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/05/26 09:00	06/05/26 21:28	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/05/26 09:00	06/05/26 21:28	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/05/26 09:00	06/05/26 21:28	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/05/26 09:00	06/05/26 21:28	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/05/26 09:00	06/05/26 21:28	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		06/05/26 09:00	06/05/26 21:28	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		06/05/26 09:00	06/05/26 21:28	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/05/26 09:00	06/05/26 21:28	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		06/05/26 09:00	06/05/26 21:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/05/26 09:00	06/05/26 21:28	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	96		70 - 130			06/05/26 09:00	06/05/26 21:28	1
13C2 PFHxA	105		70 - 130			06/05/26 09:00	06/05/26 21:28	1
13C2 PFDA	109		70 - 130			06/05/26 09:00	06/05/26 21:28	1
13C3-GenX	100		70 - 130			06/05/26 09:00	06/05/26 21:28	1

Action Limit Summary

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

Job ID: 380-218017-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-AQ

Lab Sample ID: 380-218017-1

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)	13		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	3.4		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)	17		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	3.9		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.9		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: 380-218017-2

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: 380-218017-1
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)
380-217903-B-1-A MS	Matrix Spike	101	111	108	107
380-217903-C-1-A MSD	Matrix Spike Duplicate	100	105	103	101
380-218017-1	BWS2153-S1-AQ	70	112	92	107
380-218017-2	BWS2153-S1-FB	96	105	109	100
LCS 380-231875/21-A	Lab Control Sample	104	110	113	110
MBL 380-231875/19-A	Method Blank	105	107	112	106
MRL 380-231875/20-A	Lab Control Sample	100	103	107	100

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: 380-218017-1
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)
380-217625-B-3-A MS	Matrix Spike	110	98	110	103	108	107	108	109
380-217625-C-3-A MSD	Matrix Spike Duplicate	111	104	110	108	109	115	110	109
380-218017-1	BWS2153-S1-AQ	121	100	132	116	127	108	73	108
380-218017-2	BWS2153-S1-FB	81	70	93	89	89	82	68	67
LCS 380-232138/22-A	Lab Control Sample	104	105	114	106	110	115	113	113
MBL 380-232138/20-A	Method Blank	99	108	112	112	116	118	121	116
MRL 380-232138/21-A	Lab Control Sample	102	101	112	107	115	111	109	107

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)
380-217625-B-3-A MS	Matrix Spike	110	105	108	107	112	118	116	109
380-217625-C-3-A MSD	Matrix Spike Duplicate	109	104	109	108	113	109	112	108
380-218017-1	BWS2153-S1-AQ	124	130	173	147	147	190	176	124
380-218017-2	BWS2153-S1-FB	103	98	113	121	121	135	127	129
LCS 380-232138/22-A	Lab Control Sample	110	104	109	105	110	114	108	110
MBL 380-232138/20-A	Method Blank	110	110	118	120	124	128	125	120
MRL 380-232138/21-A	Lab Control Sample	108	109	105	112	113	117	110	108

Surrogate Legend

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

QC Sample Results

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

Job ID: 380-218017-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: MBL 380-232138/20-A

Matrix: Water

Analysis Batch: 232312

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 232138

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		06/07/26 15:06	06/08/26 07:56	1
Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	99		50 - 200			06/07/26 15:06	06/08/26 07:56	1
13C6 PFDA	108		50 - 200			06/07/26 15:06	06/08/26 07:56	1
13C5 PFHxA	112		50 - 200			06/07/26 15:06	06/08/26 07:56	1
13C4 PFHpA	112		50 - 200			06/07/26 15:06	06/08/26 07:56	1
13C8 PFOA	116		50 - 200			06/07/26 15:06	06/08/26 07:56	1
13C9 PFNA	118		50 - 200			06/07/26 15:06	06/08/26 07:56	1
13C7 PFUnA	121		50 - 200			06/07/26 15:06	06/08/26 07:56	1
13C2 PFDoA	116		50 - 200			06/07/26 15:06	06/08/26 07:56	1
13C4 PFBA	110		50 - 200			06/07/26 15:06	06/08/26 07:56	1
13C5 PFPeA	110		50 - 200			06/07/26 15:06	06/08/26 07:56	1
13C3 PFBS	118		50 - 200			06/07/26 15:06	06/08/26 07:56	1
13C3 PFHxS	120		50 - 200			06/07/26 15:06	06/08/26 07:56	1

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QC Sample Results

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

Job ID: 380-218017-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: MBL 380-232138/20-A

Matrix: Water

Analysis Batch: 232312

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 232138

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	124		50 - 200	06/07/26 15:06	06/08/26 07:56	1
13C2-4:2-FTS	128		50 - 200	06/07/26 15:06	06/08/26 07:56	1
13C2-6:2-FTS	125		50 - 200	06/07/26 15:06	06/08/26 07:56	1
13C2-8:2-FTS	120		50 - 200	06/07/26 15:06	06/08/26 07:56	1

Lab Sample ID: LCS 380-232138/22-A

Matrix: Water

Analysis Batch: 232312

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 232138

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.2	52.5		ng/L		87	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	60.2	54.4		ng/L		90	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.2	64.3		ng/L		107	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.2	56.3		ng/L		93	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.2	55.7		ng/L		92	70 - 130
Perfluorodecanoic acid (PFDA)	60.2	61.1		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	60.2	57.4		ng/L		95	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.2	60.0		ng/L		100	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.2	60.0		ng/L		100	70 - 130
Perfluorohexanoic acid (PFHxA)	60.2	55.4		ng/L		92	70 - 130
Perfluorononanoic acid (PFNA)	60.2	57.6		ng/L		96	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.2	56.5		ng/L		94	70 - 130
Perfluorooctanoic acid (PFOA)	60.2	57.1		ng/L		95	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.2	56.7		ng/L		94	70 - 130
Perfluorobutanoic acid (PFBA)	60.2	58.1		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.2	56.5		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.2	53.0		ng/L		88	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.2	59.0		ng/L		98	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.2	55.0		ng/L		91	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.2	61.7		ng/L		102	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.2	59.1		ng/L		98	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.2	55.9		ng/L		93	70 - 130
Perfluoropentanoic acid (PFPeA)	60.2	60.0		ng/L		100	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.2	57.0		ng/L		95	70 - 130

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QC Sample Results

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

Job ID: 380-218017-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: LCS 380-232138/22-A

Matrix: Water

Analysis Batch: 232312

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 232138

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	60.2	58.9		ng/L		98	70 - 130
	LCS	LCS					
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	104		50 - 200				
13C6 PFDA	105		50 - 200				
13C5 PFHxA	114		50 - 200				
13C4 PFHpA	106		50 - 200				
13C8 PFOA	110		50 - 200				
13C9 PFNA	115		50 - 200				
13C7 PFUnA	113		50 - 200				
13C2 PFDoA	113		50 - 200				
13C4 PFBA	110		50 - 200				
13C5 PFPeA	104		50 - 200				
13C3 PFBS	109		50 - 200				
13C3 PFHxS	105		50 - 200				
13C8 PFOS	110		50 - 200				
13C2-4:2-FTS	114		50 - 200				
13C2-6:2-FTS	108		50 - 200				
13C2-8:2-FTS	110		50 - 200				

Lab Sample ID: MRL 380-232138/21-A

Matrix: Water

Analysis Batch: 232312

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 232138

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	1.90	J	ng/L		94	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.01	1.83	J	ng/L		91	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	2.18	J	ng/L		109	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.17	J	ng/L		108	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	1.99	J	ng/L		99	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.18	J	ng/L		109	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.20	J	ng/L		110	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.24	J	ng/L		112	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.01	J	ng/L		100	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	1.99	J	ng/L		99	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.16	J	ng/L		107	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.00	J	ng/L		99	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	1.97	J	ng/L		98	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.16	J	ng/L		107	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	2.19	J	ng/L		109	50 - 150

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QC Sample Results

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

Job ID: 380-218017-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: MRL 380-232138/21-A

Matrix: Water

Analysis Batch: 232312

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 232138

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.31	J	ng/L		115	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.17	J	ng/L		108	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.41	J	ng/L		120	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	1.96	J	ng/L		98	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.01	1.98	J	ng/L		99	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.08	J	ng/L		103	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	2.01	J	ng/L		100	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	2.28	J	ng/L		114	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	2.04	J	ng/L		102	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	1.91	J	ng/L		95	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	102		50 - 200
13C6 PFDA	101		50 - 200
13C5 PFHxA	112		50 - 200
13C4 PFHpA	107		50 - 200
13C8 PFOA	115		50 - 200
13C9 PFNA	111		50 - 200
13C7 PFUnA	109		50 - 200
13C2 PFDoA	107		50 - 200
13C4 PFBA	108		50 - 200
13C5 PFPeA	109		50 - 200
13C3 PFBS	105		50 - 200
13C3 PFHxS	112		50 - 200
13C8 PFOS	113		50 - 200
13C2-4:2-FTS	117		50 - 200
13C2-6:2-FTS	110		50 - 200
13C2-8:2-FTS	108		50 - 200

Lab Sample ID: 380-217625-B-3-A MS

Matrix: Water

Analysis Batch: 232312

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 232138

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		121	105		ng/L		87	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		121	104		ng/L		86	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	116		ng/L		96	70 - 130

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QC Sample Results

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

Job ID: 380-218017-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: 380-217625-B-3-A MS

Matrix: Water

Analysis Batch: 232312

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 232138

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		121	106		ng/L		88	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		121	114		ng/L		94	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		121	125		ng/L		104	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		121	109		ng/L		90	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		121	117		ng/L		97	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		121	111		ng/L		91	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		121	112		ng/L		92	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		121	111		ng/L		92	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		121	110		ng/L		91	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		121	110		ng/L		91	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		121	110		ng/L		91	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		121	111		ng/L		92	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	108		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	103		ng/L		85	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	107		ng/L		88	70 - 130
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		121	117		ng/L		97	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		121	114		ng/L		95	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	118		ng/L		98	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	112		ng/L		93	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		121	113		ng/L		93	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	110		ng/L		91	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	115		ng/L		95	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	MS Limits
13C3 HFPO-DA	110		50 - 200
13C6 PFDA	98		50 - 200
13C5 PFHxA	110		50 - 200
13C4 PFHpA	103		50 - 200
13C8 PFOA	108		50 - 200
13C9 PFNA	107		50 - 200
13C7 PFUnA	108		50 - 200
13C2 PFDoA	109		50 - 200
13C4 PFBA	110		50 - 200
13C5 PFPeA	105		50 - 200
13C3 PFBS	108		50 - 200
13C3 PFHxS	107		50 - 200
13C8 PFOS	112		50 - 200

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QC Sample Results

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

Job ID: 380-218017-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: 380-217625-B-3-A MS

Matrix: Water

Analysis Batch: 232312

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 232138

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	118		50 - 200
13C2-6:2-FTS	116		50 - 200
13C2-8:2-FTS	109		50 - 200

Lab Sample ID: 380-217625-C-3-A MSD

Matrix: Water

Analysis Batch: 232312

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 232138

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		121	96.6		ng/L		80	70 - 130	9	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		121	97.2		ng/L		80	70 - 130	6	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		121	113		ng/L		93	70 - 130	3	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		121	113		ng/L		93	70 - 130	6	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		121	110		ng/L		91	70 - 130	3	30
Perfluorodecanoic acid (PFDA)	<2.0		121	122		ng/L		101	70 - 130	2	30
Perfluorododecanoic acid (PFDaA)	<2.0		121	110		ng/L		91	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		121	111		ng/L		92	70 - 130	5	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		121	107		ng/L		88	70 - 130	3	30
Perfluorohexanoic acid (PFHxA)	<2.0		121	113		ng/L		93	70 - 130	1	30
Perfluorononanoic acid (PFNA)	<2.0		121	106		ng/L		88	70 - 130	5	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		121	105		ng/L		87	70 - 130	4	30
Perfluorooctanoic acid (PFOA)	<2.0		121	111		ng/L		92	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		121	111		ng/L		92	70 - 130	1	30
Perfluorobutanoic acid (PFBA)	<2.0		121	111		ng/L		92	70 - 130	0	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		121	111		ng/L		92	70 - 130	3	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		121	117		ng/L		97	70 - 130	13	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		121	111		ng/L		92	70 - 130	4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		121	107		ng/L		89	70 - 130	9	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		121	115		ng/L		95	70 - 130	1	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		121	120		ng/L		99	70 - 130	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		121	112		ng/L		93	70 - 130	0	30
Perfluoropentanoic acid (PFPeA)	<2.0		121	114		ng/L		94	70 - 130	1	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		121	109		ng/L		90	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		121	107		ng/L		89	70 - 130	7	30

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QC Sample Results

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

Job ID: 380-218017-1
SDG: Site S1 PFAS 533/537.1

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

<i>Isotope Dilution</i>	<i>MSD %Recovery</i>	<i>MSD Qualifier</i>	<i>Limits</i>
13C3 HFPO-DA	111		50 - 200
13C6 PFDA	104		50 - 200
13C5 PFHxA	110		50 - 200
13C4 PFHpA	108		50 - 200
13C8 PFOA	109		50 - 200
13C9 PFNA	115		50 - 200
13C7 PFUnA	110		50 - 200
13C2 PFDoA	109		50 - 200
13C4 PFBA	109		50 - 200
13C5 PFPeA	104		50 - 200
13C3 PFBS	109		50 - 200
13C3 PFHxS	108		50 - 200
13C8 PFOS	113		50 - 200
13C2-4:2-FTS	109		50 - 200
13C2-6:2-FTS	112		50 - 200
13C2-8:2-FTS	108		50 - 200

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

Lab Sample ID: MBL 380-231875/19-A
Matrix: Water
Analysis Batch: 232025

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 231875

<i>Analyte</i>	<i>MBL Result</i>	<i>MBL Qualifier</i>	<i>RL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		06/05/26 09:00	06/05/26 17:45	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		06/05/26 09:00	06/05/26 17:45	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		06/05/26 09:00	06/05/26 17:45	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		06/05/26 09:00	06/05/26 17:45	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		06/05/26 09:00	06/05/26 17:45	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		06/05/26 09:00	06/05/26 17:45	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		06/05/26 09:00	06/05/26 17:45	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		06/05/26 09:00	06/05/26 17:45	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		06/05/26 09:00	06/05/26 17:45	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		06/05/26 09:00	06/05/26 17:45	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		06/05/26 09:00	06/05/26 17:45	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		06/05/26 09:00	06/05/26 17:45	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		06/05/26 09:00	06/05/26 17:45	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		06/05/26 09:00	06/05/26 17:45	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		06/05/26 09:00	06/05/26 17:45	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		06/05/26 09:00	06/05/26 17:45	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		06/05/26 09:00	06/05/26 17:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		06/05/26 09:00	06/05/26 17:45	1
<i>Surrogate</i>	<i>MBL %Recovery</i>	<i>MBL Qualifier</i>	<i>Limits</i>			<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
d5-NEtFOSAA	105		70 - 130			06/05/26 09:00	06/05/26 17:45	1
13C2 PFHxA	107		70 - 130			06/05/26 09:00	06/05/26 17:45	1
13C2 PFDA	112		70 - 130			06/05/26 09:00	06/05/26 17:45	1

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QC Sample Results

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

Job ID: 380-218017-1
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 380-231875/19-A
Matrix: Water
Analysis Batch: 232025

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 231875

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-GenX	106		70 - 130	06/05/26 09:00	06/05/26 17:45	1

Lab Sample ID: LCS 380-231875/21-A
Matrix: Water
Analysis Batch: 232025

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 231875

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	50.2	49.3		ng/L		98	70 - 130
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	50.2	53.8		ng/L		107	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.2	51.6		ng/L		103	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.2	49.8		ng/L		99	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.2	50.5		ng/L		101	70 - 130
Perfluorohexanoic acid (PFHxA)	50.2	52.7		ng/L		105	70 - 130
Perfluorododecanoic acid (PFDoA)	50.2	50.4		ng/L		100	70 - 130
Perfluorooctanoic acid (PFOA)	50.2	52.9		ng/L		105	70 - 130
Perfluorodecanoic acid (PFDA)	50.2	49.7		ng/L		99	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.2	52.8		ng/L		105	70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.2	48.7		ng/L		97	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.2	51.8		ng/L		103	70 - 130
Perfluorononanoic acid (PFNA)	50.2	53.4		ng/L		106	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.2	45.9		ng/L		91	70 - 130
Perfluorotridecanoic acid (PFTrDA)	50.2	52.8		ng/L		105	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	50.2	52.5		ng/L		105	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	50.2	49.5		ng/L		99	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.2	49.9		ng/L		99	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	104		70 - 130
13C2 PFHxA	110		70 - 130
13C2 PFDA	113		70 - 130
13C3-GenX	110		70 - 130

QC Sample Results

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

Job ID: 380-218017-1
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 380-231875/20-A

Matrix: Water

Analysis Batch: 232025

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 231875

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	2.01	1.90	J	ng/L		94	50 - 150
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	2.01	2.10	J	ng/L		104	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.10	J	ng/L		105	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.01	2.12	J	ng/L		105	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.01	2.06	J	ng/L		102	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	1.95	J	ng/L		97	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.04	J	ng/L		102	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.12	J	ng/L		106	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.07	J	ng/L		103	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.15	J	ng/L		107	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.08	J	ng/L		103	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	1.94	J	ng/L		96	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.09	J	ng/L		104	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.01	1.90	J	ng/L		94	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.01	2.18	J	ng/L		108	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	2.12	J	ng/L		105	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.10	J	ng/L		104	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	1.92	J	ng/L		95	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	100		70 - 130
13C2 PFHxA	103		70 - 130
13C2 PFDA	107		70 - 130
13C3-GenX	100		70 - 130

Lab Sample ID: 380-217903-B-1-A MS

Matrix: Water

Analysis Batch: 232025

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 231875

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		50.2	49.4		ng/L		98	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.2	54.9		ng/L		109	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.2	52.4		ng/L		104	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.2	50.6		ng/L		101	70 - 130

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QC Sample Results

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

Job ID: 380-218017-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: 380-217903-B-1-A MS

Matrix: Water

Analysis Batch: 232025

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 231875

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec		
	Result	Qualifier	Added	Result	Qualifier				Limits		
N-ethylperfluorooctanesulfonami doacetic acid (NEtFOSAA)	<2.0		50.2	50.0		ng/L		100	70 - 130		
Perfluorohexanoic acid (PFHxA)	<2.0		50.2	50.1		ng/L		100	70 - 130		
Perfluorododecanoic acid (PFDoA)	<2.0		50.2	51.0		ng/L		102	70 - 130		
Perfluorooctanoic acid (PFOA)	<2.0		50.2	52.6		ng/L		105	70 - 130		
Perfluorodecanoic acid (PFDA)	<2.0		50.2	49.6		ng/L		99	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)	<2.0		50.2	55.0		ng/L		110	70 - 130		
Perfluorobutanesulfonic acid (PFBS)	<2.0		50.2	52.5		ng/L		105	70 - 130		
Perfluoroheptanoic acid (PFHpA)	<2.0		50.2	54.6		ng/L		109	70 - 130		
Perfluorononanoic acid (PFNA)	<2.0		50.2	52.8		ng/L		105	70 - 130		
Perfluorotetradecanoic acid (PFTA)	<2.0		50.2	48.1		ng/L		96	70 - 130		
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.2	53.1		ng/L		106	70 - 130		
9-Chlorohexadecafluoro-3-oxan onane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.2	55.0		ng/L		110	70 - 130		
11-Chloroeicosafluoro-3-oxaund ecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.2	53.5		ng/L		107	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.2	50.9		ng/L		101	70 - 130		

Lab Sample ID: 380-217903-C-1-A MSD

Matrix: Water

Analysis Batch: 232025

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 231875

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.1	46.2		ng/L		92	70 - 130	7	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.1	52.9		ng/L		106	70 - 130	4	30
Perfluoroundecanoic acid (PFUnA)	<2.0		50.1	50.7		ng/L		101	70 - 130	3	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.1	49.2		ng/L		98	70 - 130	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.1	49.2		ng/L		98	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		50.1	49.8		ng/L		99	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)	<2.0		50.1	47.5		ng/L		95	70 - 130	7	30
Perfluorooctanoic acid (PFOA)	<2.0		50.1	50.8		ng/L		101	70 - 130	3	30
Perfluorodecanoic acid (PFDA)	<2.0		50.1	49.0		ng/L		98	70 - 130	1	30

Eurofins Pomona

QC Sample Results

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

Job ID: 380-218017-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: 380-217903-C-1-A MSD

Matrix: Water

Analysis Batch: 232025

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 231875

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	<2.0		50.1	53.1		ng/L		106	70 - 130	4	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		50.1	53.0		ng/L		106	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		50.1	49.8		ng/L		99	70 - 130	9	30
Perfluorononanoic acid (PFNA)	<2.0		50.1	50.8		ng/L		101	70 - 130	4	30
Perfluorotetradecanoic acid (PFTA)	<2.0		50.1	45.7		ng/L		91	70 - 130	5	30
Perfluorotridecanoic acid (PFTTrDA)	<2.0		50.1	50.0		ng/L		100	70 - 130	6	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.1	51.4		ng/L		103	70 - 130	7	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.1	48.5		ng/L		97	70 - 130	10	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.1	47.3		ng/L		94	70 - 130	7	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
d5-NEtFOSAA	100		70 - 130								
13C2 PFHxA	105		70 - 130								
13C2 PFDA	103		70 - 130								
13C3-GenX	101		70 - 130								

QC Association Summary

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

Job ID: 380-218017-1
SDG: Site S1 PFAS 533/537.1

LCMS

Prep Batch: 231875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-218017-1	BWS2153-S1-AQ	Total/NA	Water	537.1 DW	
380-218017-2	BWS2153-S1-FB	Total/NA	Water	537.1 DW	
MBL 380-231875/19-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-231875/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-231875/20-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-217903-B-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-217903-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 232025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-218017-2	BWS2153-S1-FB	Total/NA	Water	EPA 537.1 V2	231875
MBL 380-231875/19-A	Method Blank	Total/NA	Water	EPA 537.1 V2	231875
LCS 380-231875/21-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	231875
MRL 380-231875/20-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	231875
380-217903-B-1-A MS	Matrix Spike	Total/NA	Water	EPA 537.1 V2	231875
380-217903-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	EPA 537.1 V2	231875

Analysis Batch: 232083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-218017-1	BWS2153-S1-AQ	Total/NA	Water	EPA 537.1 V2	231875

Prep Batch: 232138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-218017-1	BWS2153-S1-AQ	Total/NA	Water	533	
380-218017-2	BWS2153-S1-FB	Total/NA	Water	533	
MBL 380-232138/20-A	Method Blank	Total/NA	Water	533	
LCS 380-232138/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-232138/21-A	Lab Control Sample	Total/NA	Water	533	
380-217625-B-3-A MS	Matrix Spike	Total/NA	Water	533	
380-217625-C-3-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 232312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-218017-2	BWS2153-S1-FB	Total/NA	Water	533	232138
MBL 380-232138/20-A	Method Blank	Total/NA	Water	533	232138
LCS 380-232138/22-A	Lab Control Sample	Total/NA	Water	533	232138
MRL 380-232138/21-A	Lab Control Sample	Total/NA	Water	533	232138
380-217625-B-3-A MS	Matrix Spike	Total/NA	Water	533	232138
380-217625-C-3-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	232138

Analysis Batch: 232376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-218017-1	BWS2153-S1-AQ	Total/NA	Water	533	232138

Lab Chronicle

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

Job ID: 380-218017-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-AQ

Lab Sample ID: 380-218017-1

Date Collected: 06/03/26 08:30

Matrix: Water

Date Received: 06/04/26 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			232138	N8NE	EA POM	06/07/26 15:06
Total/NA	Analysis	533		1	232376	M7ML	EA POM	06/08/26 12:42
Total/NA	Prep	537.1 DW			231875	E9PK	EA POM	06/05/26 09:00
Total/NA	Analysis	EPA 537.1 V2		1	232083	Y5FM	EA POM	06/06/26 10:52

Client Sample ID: BWS2153-S1-FB

Lab Sample ID: 380-218017-2

Date Collected: 06/03/26 08:30

Matrix: Water

Date Received: 06/04/26 09:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			232138	N8NE	EA POM	06/07/26 15:06
Total/NA	Analysis	533		1	232312	SZ9R	EA POM	06/08/26 11:45
Total/NA	Prep	537.1 DW			231875	E9PK	EA POM	06/05/26 09:00
Total/NA	Analysis	EPA 537.1 V2		1	232025	Y5FM	EA POM	06/05/26 21:28

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: 380-218017-1
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 *

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

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

Method Summary

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

Job ID: 380-218017-1
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: 380-218017-1
SDG: Site S1 PFAS 533/537.1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-218017-1	BWS2153-S1-AQ	Water	06/03/26 08:30	06/04/26 09:35	Hawaii
380-218017-2	BWS2153-S1-FB	Water	06/03/26 08:30	06/04/26 09:35	Hawaii

Chain of Custody Record

[illegible]

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-218017-1
SDG Number: Site S1 PFAS 533/537.1

Login Number: 218017

List Number: 1

Creator: Ngo, Theodore

List Source: Eurofins Pomona

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