

ANALYTICAL REPORT

PREPARED FOR

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City & County of Honolulu
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JOB DESCRIPTION

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

JOB NUMBER

380-220626-1

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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: 380-220626-1
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: 380-220626-1

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Job Narrative 380-220626-1

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 6/18/2026 9:43 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 2.3°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 (380-220626-1). (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: 380-220626-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-AQ

Lab Sample ID: 380-220626-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	3.6		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	14		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.4		2.0	ng/L	1		533	Total/NA
Perfluorobutanoic acid (PFBA)	2.2		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	15		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	3.8		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.7		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.4		2.0	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: BWS2153-S1-FB

Lab Sample ID: 380-220626-2

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: 380-220626-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-AQ

Lab Sample ID: 380-220626-1

Date Collected: 06/17/26 09:00

Matrix: Water

Date Received: 06/18/26 09:43

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		06/22/26 15:55	06/23/26 09:43	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
Perfluorohexanesulfonic acid (PFHxS)	3.6		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
Perfluorooctanesulfonic acid (PFOS)	14		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
Perfluorooctanoic acid (PFOA)	3.4		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
Perfluorobutanoic acid (PFBA)	2.2		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:43	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	90		50 - 200	06/22/26 15:55	06/23/26 09:43	1
13C6 PFDA	105		50 - 200	06/22/26 15:55	06/23/26 09:43	1
13C5 PFHxA	102		50 - 200	06/22/26 15:55	06/23/26 09:43	1
13C4 PFHpA	97		50 - 200	06/22/26 15:55	06/23/26 09:43	1
13C8 PFOA	111		50 - 200	06/22/26 15:55	06/23/26 09:43	1
13C9 PFNA	106		50 - 200	06/22/26 15:55	06/23/26 09:43	1
13C7 PFUnA	79		50 - 200	06/22/26 15:55	06/23/26 09:43	1
13C2 PFDoA	115		50 - 200	06/22/26 15:55	06/23/26 09:43	1
13C4 PFBA	111		50 - 200	06/22/26 15:55	06/23/26 09:43	1
13C5 PFPeA	108		50 - 200	06/22/26 15:55	06/23/26 09:43	1
13C3 PFBS	125		50 - 200	06/22/26 15:55	06/23/26 09:43	1
13C3 PFHxS	108		50 - 200	06/22/26 15:55	06/23/26 09:43	1

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Client Sample Results

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

Job ID: 380-220626-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-AQ

Lab Sample ID: 380-220626-1

Date Collected: 06/17/26 09:00

Matrix: Water

Date Received: 06/18/26 09:43

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	120		50 - 200	06/22/26 15:55	06/23/26 09:43	1
13C2-4:2-FTS	171		50 - 200	06/22/26 15:55	06/23/26 09:43	1
13C2-6:2-FTS	192		50 - 200	06/22/26 15:55	06/23/26 09:43	1
13C2-8:2-FTS	175		50 - 200	06/22/26 15:55	06/23/26 09:43	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		06/23/26 02:30	06/23/26 20:16	1
Perfluorooctanesulfonic acid (PFOS)	15		2.0	ng/L		06/23/26 02:30	06/23/26 20:16	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:16	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:16	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:16	1
Perfluorooctanoic acid (PFOA)	3.8		2.0	ng/L		06/23/26 02:30	06/23/26 20:16	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:16	1
Perfluorohexanesulfonic acid (PFHxS)	3.7		2.0	ng/L		06/23/26 02:30	06/23/26 20:16	1
Perfluorobutanesulfonic acid (PFBS)	2.4		2.0	ng/L		06/23/26 02:30	06/23/26 20:16	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:16	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:16	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:16	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:16	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:16	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	86		70 - 130	06/23/26 02:30	06/23/26 20:16	1
13C2 PFHxA	101		70 - 130	06/23/26 02:30	06/23/26 20:16	1
13C2 PFDA	89		70 - 130	06/23/26 02:30	06/23/26 20:16	1
13C3-GenX	96		70 - 130	06/23/26 02:30	06/23/26 20:16	1

Client Sample ID: BWS2153-S1-FB

Lab Sample ID: 380-220626-2

Date Collected: 06/17/26 09:00

Matrix: Water

Date Received: 06/18/26 09:43

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		06/22/26 15:55	06/23/26 09:53	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1

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Client Sample Results

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

Job ID: 380-220626-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-FB

Lab Sample ID: 380-220626-2

Date Collected: 06/17/26 09:00

Matrix: Water

Date Received: 06/18/26 09:43

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
Nonfluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		06/22/26 15:55	06/23/26 09:53	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	99		50 - 200	06/22/26 15:55	06/23/26 09:53	1
13C6 PFDA	107		50 - 200	06/22/26 15:55	06/23/26 09:53	1
13C5 PFHxA	99		50 - 200	06/22/26 15:55	06/23/26 09:53	1
13C4 PFHpA	105		50 - 200	06/22/26 15:55	06/23/26 09:53	1
13C8 PFOA	109		50 - 200	06/22/26 15:55	06/23/26 09:53	1
13C9 PFNA	120		50 - 200	06/22/26 15:55	06/23/26 09:53	1
13C7 PFUnA	118		50 - 200	06/22/26 15:55	06/23/26 09:53	1
13C2 PFDoA	112		50 - 200	06/22/26 15:55	06/23/26 09:53	1
13C4 PFBA	111		50 - 200	06/22/26 15:55	06/23/26 09:53	1
13C5 PFPeA	103		50 - 200	06/22/26 15:55	06/23/26 09:53	1
13C3 PFBS	108		50 - 200	06/22/26 15:55	06/23/26 09:53	1
13C3 PFHxS	110		50 - 200	06/22/26 15:55	06/23/26 09:53	1
13C8 PFOS	115		50 - 200	06/22/26 15:55	06/23/26 09:53	1
13C2-4:2-FTS	92		50 - 200	06/22/26 15:55	06/23/26 09:53	1
13C2-6:2-FTS	116		50 - 200	06/22/26 15:55	06/23/26 09:53	1
13C2-8:2-FTS	137		50 - 200	06/22/26 15:55	06/23/26 09:53	1

Eurofins Pomona

Client Sample Results

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

Job ID: 380-220626-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-FB

Lab Sample ID: 380-220626-2

Date Collected: 06/17/26 09:00

Matrix: Water

Date Received: 06/18/26 09:43

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		06/23/26 02:30	06/23/26 20:26	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:26	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:26	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:26	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:26	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:26	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:26	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:26	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:26	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:26	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:26	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:26	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:26	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:26	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:26	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:26	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/23/26 02:30	06/23/26 20:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	102		70 - 130			06/23/26 02:30	06/23/26 20:26	1
13C2 PFHxA	112		70 - 130			06/23/26 02:30	06/23/26 20:26	1
13C2 PFDA	107		70 - 130			06/23/26 02:30	06/23/26 20:26	1
13C3-GenX	103		70 - 130			06/23/26 02:30	06/23/26 20:26	1

Action Limit Summary

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

Job ID: 380-220626-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-AQ

Lab Sample ID: 380-220626-1

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)	3.6		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	14		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)	15		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	3.8		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.7		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: 380-220626-2

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: 380-220626-1
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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-220625-E-1-A MS	Matrix Spike	101	104	100	99
380-220625-F-1-A MSD	Matrix Spike Duplicate	105	109	106	100
380-220626-1	BWS2153-S1-AQ	86	101	89	96
380-220626-2	BWS2153-S1-FB	102	112	107	103
LCS 380-235413/21-A	Lab Control Sample	101	99	103	87
MBL 380-235413/19-A	Method Blank	103	105	102	92
MRL 380-235413/20-A	Lab Control Sample	105	108	103	94

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: 380-220626-1
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)
380-220625-B-1-A MS	Matrix Spike	108	107	107	109	111	119	114	110
380-220625-C-1-A MSD	Matrix Spike Duplicate	103	102	98	99	107	113	112	105
380-220626-1	BWS2153-S1-AQ	90	105	102	97	111	106	79	115
380-220626-2	BWS2153-S1-FB	99	107	99	105	109	120	118	112
LCS 380-235471/22-A	Lab Control Sample	101	102	101	98	103	115	114	104
MBL 380-235471/20-A	Method Blank	109	111	115	117	123	135	121	111
MRL 380-235471/21-A	Lab Control Sample	123	109	128	129	138	136	118	106

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)
380-220625-B-1-A MS	Matrix Spike	114	109	104	107	113	88	107	124
380-220625-C-1-A MSD	Matrix Spike Duplicate	107	103	97	105	109	86	107	122
380-220626-1	BWS2153-S1-AQ	111	108	125	108	120	171	192	175
380-220626-2	BWS2153-S1-FB	111	103	108	110	115	92	116	137
LCS 380-235471/22-A	Lab Control Sample	105	99	99	103	110	83	103	117
MBL 380-235471/20-A	Method Blank	123	113	116	119	127	109	128	137
MRL 380-235471/21-A	Lab Control Sample	132	125	126	130	128	119	139	134

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: 380-220626-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: MBL 380-235471/20-A

Matrix: Water

Analysis Batch: 235609

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 235471

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<0.30		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	<0.30		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		06/22/26 15:55	06/23/26 07:48	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	109		50 - 200	06/22/26 15:55	06/23/26 07:48	1
13C6 PFDA	111		50 - 200	06/22/26 15:55	06/23/26 07:48	1
13C5 PFHxA	115		50 - 200	06/22/26 15:55	06/23/26 07:48	1
13C4 PFHpA	117		50 - 200	06/22/26 15:55	06/23/26 07:48	1
13C8 PFOA	123		50 - 200	06/22/26 15:55	06/23/26 07:48	1
13C9 PFNA	135		50 - 200	06/22/26 15:55	06/23/26 07:48	1
13C7 PFUnA	121		50 - 200	06/22/26 15:55	06/23/26 07:48	1
13C2 PFDoA	111		50 - 200	06/22/26 15:55	06/23/26 07:48	1
13C4 PFBA	123		50 - 200	06/22/26 15:55	06/23/26 07:48	1
13C5 PFPeA	113		50 - 200	06/22/26 15:55	06/23/26 07:48	1
13C3 PFBS	116		50 - 200	06/22/26 15:55	06/23/26 07:48	1
13C3 PFHxS	119		50 - 200	06/22/26 15:55	06/23/26 07:48	1

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QC Sample Results

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

Job ID: 380-220626-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: MBL 380-235471/20-A

Matrix: Water

Analysis Batch: 235609

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 235471

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	127		50 - 200	06/22/26 15:55	06/23/26 07:48	1
13C2-4:2-FTS	109		50 - 200	06/22/26 15:55	06/23/26 07:48	1
13C2-6:2-FTS	128		50 - 200	06/22/26 15:55	06/23/26 07:48	1
13C2-8:2-FTS	137		50 - 200	06/22/26 15:55	06/23/26 07:48	1

Lab Sample ID: LCS 380-235471/22-A

Matrix: Water

Analysis Batch: 235609

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 235471

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	120	97.6		ng/L		81	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	120	104		ng/L		86	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	114		ng/L		95	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	107		ng/L		89	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	103		ng/L		86	70 - 130
Perfluorodecanoic acid (PFDA)	120	114		ng/L		95	70 - 130
Perfluorododecanoic acid (PFDoA)	120	109		ng/L		91	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	109		ng/L		91	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	106		ng/L		88	70 - 130
Perfluorohexanoic acid (PFHxA)	120	105		ng/L		88	70 - 130
Perfluorononanoic acid (PFNA)	120	103		ng/L		85	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	103		ng/L		85	70 - 130
Perfluorooctanoic acid (PFOA)	120	110		ng/L		91	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	104		ng/L		86	70 - 130
Perfluorobutanoic acid (PFBA)	120	104		ng/L		86	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	105		ng/L		87	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	108		ng/L		90	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	104		ng/L		86	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	103		ng/L		85	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	112		ng/L		93	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	109		ng/L		91	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	105		ng/L		87	70 - 130
Perfluoropentanoic acid (PFPeA)	120	108		ng/L		90	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	104		ng/L		86	70 - 130

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QC Sample Results

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

Job ID: 380-220626-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: LCS 380-235471/22-A

Matrix: Water

Analysis Batch: 235609

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 235471

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	120	105		ng/L		87	70 - 130
LCS LCS							
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	101		50 - 200				
13C6 PFDA	102		50 - 200				
13C5 PFHxA	101		50 - 200				
13C4 PFHpA	98		50 - 200				
13C8 PFOA	103		50 - 200				
13C9 PFNA	115		50 - 200				
13C7 PFUnA	114		50 - 200				
13C2 PFDoA	104		50 - 200				
13C4 PFBA	105		50 - 200				
13C5 PFPeA	99		50 - 200				
13C3 PFBS	99		50 - 200				
13C3 PFHxS	103		50 - 200				
13C8 PFOS	110		50 - 200				
13C2-4:2-FTS	83		50 - 200				
13C2-6:2-FTS	103		50 - 200				
13C2-8:2-FTS	117		50 - 200				

Lab Sample ID: MRL 380-235471/21-A

Matrix: Water

Analysis Batch: 235609

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 235471

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	1.57	J	ng/L		78	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.01	1.75	J	ng/L		87	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	1.87	J	ng/L		93	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	1.94	J	ng/L		96	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	1.92	J	ng/L		96	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.03	J	ng/L		101	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	1.94	J	ng/L		97	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	1.91	J	ng/L		95	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	1.85	J	ng/L		92	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	1.91	J	ng/L		95	50 - 150
Perfluorononanoic acid (PFNA)	2.01	1.84	J	ng/L		92	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	1.77	J	ng/L		88	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	1.92	J	ng/L		95	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	1.77	J	ng/L		88	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	2.06	J	ng/L		102	50 - 150

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QC Sample Results

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

Job ID: 380-220626-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: MRL 380-235471/21-A

Matrix: Water

Analysis Batch: 235609

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 235471

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	1.86	J	ng/L		92	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	1.99	J	ng/L		99	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.10	J	ng/L		104	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	1.84	J	ng/L		92	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.01	1.85	J	ng/L		92	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	1.87	J	ng/L		93	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	1.81	J	ng/L		90	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	1.90	J	ng/L		95	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	1.87	J	ng/L		93	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	1.84	J	ng/L		92	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	123		50 - 200
13C6 PFDA	109		50 - 200
13C5 PFHxA	128		50 - 200
13C4 PFHpA	129		50 - 200
13C8 PFOA	138		50 - 200
13C9 PFNA	136		50 - 200
13C7 PFUnA	118		50 - 200
13C2 PFDoA	106		50 - 200
13C4 PFBA	132		50 - 200
13C5 PFPeA	125		50 - 200
13C3 PFBS	126		50 - 200
13C3 PFHxS	130		50 - 200
13C8 PFOS	128		50 - 200
13C2-4:2-FTS	119		50 - 200
13C2-6:2-FTS	139		50 - 200
13C2-8:2-FTS	134		50 - 200

Lab Sample ID: 380-220625-B-1-A MS

Matrix: Water

Analysis Batch: 235609

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 235471

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		120	96.2		ng/L		80	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		120	102		ng/L		85	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	107		ng/L		89	70 - 130

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QC Sample Results

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

Job ID: 380-220626-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: 380-220625-B-1-A MS

Matrix: Water

Analysis Batch: 235609

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 235471

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		120	107		ng/L		89	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		120	105		ng/L		86	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		120	110		ng/L		91	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		120	103		ng/L		85	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		120	104		ng/L		85	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	2.3		120	109		ng/L		89	70 - 130
Perfluorohexanoic acid (PFHxA)	2.0		120	104		ng/L		85	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		120	103		ng/L		86	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	105		ng/L		87	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		120	107		ng/L		88	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		120	104		ng/L		86	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		120	108		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	104		ng/L		86	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	108		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	109		ng/L		90	70 - 130
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<2.0		120	103		ng/L		86	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		120	105		ng/L		87	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	106		ng/L		88	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	105		ng/L		87	70 - 130
Perfluoropentanoic acid (PFPeA)	2.9		120	110		ng/L		89	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	103		ng/L		85	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	104		ng/L		87	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C3 HFPO-DA	108		50 - 200
13C6 PFDA	107		50 - 200
13C5 PFHxA	107		50 - 200
13C4 PFHpA	109		50 - 200
13C8 PFOA	111		50 - 200
13C9 PFNA	119		50 - 200
13C7 PFUnA	114		50 - 200
13C2 PFDoA	110		50 - 200
13C4 PFBA	114		50 - 200
13C5 PFPeA	109		50 - 200
13C3 PFBS	104		50 - 200
13C3 PFHxS	107		50 - 200
13C8 PFOS	113		50 - 200

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QC Sample Results

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

Job ID: 380-220626-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: 380-220625-B-1-A MS

Matrix: Water

Analysis Batch: 235609

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 235471

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	88		50 - 200
13C2-6:2-FTS	107		50 - 200
13C2-8:2-FTS	124		50 - 200

Lab Sample ID: 380-220625-C-1-A MSD

Matrix: Water

Analysis Batch: 235609

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 235471

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		120	100		ng/L		83	70 - 130	4	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		120	104		ng/L		86	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	112		ng/L		93	70 - 130	5	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		120	105		ng/L		88	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		120	111		ng/L		91	70 - 130	5	30
Perfluorodecanoic acid (PFDA)	<2.0		120	115		ng/L		95	70 - 130	5	30
Perfluorododecanoic acid (PFDaA)	<2.0		120	108		ng/L		90	70 - 130	5	30
Perfluoroheptanoic acid (PFHpA)	<2.0		120	112		ng/L		93	70 - 130	8	30
Perfluorohexanesulfonic acid (PFHxS)	2.3		120	108		ng/L		88	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	2.0		120	109		ng/L		89	70 - 130	5	30
Perfluorononanoic acid (PFNA)	<2.0		120	107		ng/L		89	70 - 130	3	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	106		ng/L		87	70 - 130	0	30
Perfluorooctanoic acid (PFOA)	<2.0		120	111		ng/L		91	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		120	106		ng/L		88	70 - 130	2	30
Perfluorobutanoic acid (PFBA)	<2.0		120	113		ng/L		93	70 - 130	5	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	103		ng/L		85	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	104		ng/L		86	70 - 130	3	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	106		ng/L		88	70 - 130	3	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	102		ng/L		85	70 - 130	1	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		120	114		ng/L		95	70 - 130	9	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	112		ng/L		93	70 - 130	6	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	105		ng/L		87	70 - 130	1	30
Perfluoropentanoic acid (PFPeA)	2.9		120	113		ng/L		91	70 - 130	2	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	107		ng/L		88	70 - 130	4	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	104		ng/L		86	70 - 130	0	30

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QC Sample Results

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

Job ID: 380-220626-1
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	103		50 - 200
13C6 PFDA	102		50 - 200
13C5 PFHxA	98		50 - 200
13C4 PFHpA	99		50 - 200
13C8 PFOA	107		50 - 200
13C9 PFNA	113		50 - 200
13C7 PFUnA	112		50 - 200
13C2 PFDoA	105		50 - 200
13C4 PFBA	107		50 - 200
13C5 PFPeA	103		50 - 200
13C3 PFBS	97		50 - 200
13C3 PFHxS	105		50 - 200
13C8 PFOS	109		50 - 200
13C2-4:2-FTS	86		50 - 200
13C2-6:2-FTS	107		50 - 200
13C2-8:2-FTS	122		50 - 200

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

Lab Sample ID: MBL 380-235413/19-A
Matrix: Water
Analysis Batch: 235757

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 235413

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		06/23/26 02:30	06/23/26 18:12	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		06/23/26 02:30	06/23/26 18:12	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		06/23/26 02:30	06/23/26 18:12	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		06/23/26 02:30	06/23/26 18:12	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		06/23/26 02:30	06/23/26 18:12	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		06/23/26 02:30	06/23/26 18:12	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		06/23/26 02:30	06/23/26 18:12	1
Perfluorooctanoic acid (PFOA)	0.383 J		2.0	ng/L		06/23/26 02:30	06/23/26 18:12	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		06/23/26 02:30	06/23/26 18:12	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		06/23/26 02:30	06/23/26 18:12	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		06/23/26 02:30	06/23/26 18:12	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		06/23/26 02:30	06/23/26 18:12	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		06/23/26 02:30	06/23/26 18:12	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		06/23/26 02:30	06/23/26 18:12	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		06/23/26 02:30	06/23/26 18:12	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		06/23/26 02:30	06/23/26 18:12	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		06/23/26 02:30	06/23/26 18:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		06/23/26 02:30	06/23/26 18:12	1
Surrogate	MBL %Recovery	MBL Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	103		70 - 130			06/23/26 02:30	06/23/26 18:12	1
13C2 PFHxA	105		70 - 130			06/23/26 02:30	06/23/26 18:12	1
13C2 PFDA	102		70 - 130			06/23/26 02:30	06/23/26 18:12	1

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QC Sample Results

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

Job ID: 380-220626-1
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 380-235413/19-A
Matrix: Water
Analysis Batch: 235757

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 235413

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-GenX	92		70 - 130	06/23/26 02:30	06/23/26 18:12	1

Lab Sample ID: LCS 380-235413/21-A
Matrix: Water
Analysis Batch: 235757

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 235413

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	25.2	20.5		ng/L		82	70 - 130
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	25.2	25.9		ng/L		103	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.2	25.7		ng/L		102	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.2	23.3		ng/L		93	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.2	24.5		ng/L		97	70 - 130
Perfluorohexanoic acid (PFHxA)	25.2	22.9		ng/L		91	70 - 130
Perfluorododecanoic acid (PFDoA)	25.2	26.2		ng/L		104	70 - 130
Perfluorooctanoic acid (PFOA)	25.2	24.6		ng/L		98	70 - 130
Perfluorodecanoic acid (PFDA)	25.2	24.8		ng/L		99	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.2	26.7		ng/L		106	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.2	24.9		ng/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.2	23.4		ng/L		93	70 - 130
Perfluorononanoic acid (PFNA)	25.2	25.7		ng/L		102	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.2	23.1		ng/L		92	70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.2	25.7		ng/L		102	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.2	25.7		ng/L		102	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.2	25.4		ng/L		101	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.2	22.7		ng/L		90	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	101		70 - 130
13C2 PFHxA	99		70 - 130
13C2 PFDA	103		70 - 130
13C3-GenX	87		70 - 130

QC Sample Results

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

Job ID: 380-220626-1
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 380-235413/20-A

Matrix: Water

Analysis Batch: 235757

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 235413

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.80	J	ng/L		90	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.06	J	ng/L		103	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.08	J	ng/L		104	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.03	J	ng/L		101	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.17	J	ng/L		108	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.98	J	ng/L		99	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.02	J	ng/L		101	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.00	J	ng/L		100	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.00	J	ng/L		100	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.98	J	ng/L		99	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.03	J	ng/L		101	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.17	J	ng/L		109	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	1.78	J	ng/L		89	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.08	J	ng/L		104	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	1.95	J	ng/L		97	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.89	J	ng/L		94	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.92	J	ng/L		96	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	105		70 - 130
13C2 PFHxA	108		70 - 130
13C2 PFDA	103		70 - 130
13C3-GenX	94		70 - 130

Lab Sample ID: 380-220625-E-1-A MS

Matrix: Water

Analysis Batch: 235757

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 235413

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	23.0		ng/L		92	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.1	26.0		ng/L		101	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	24.5		ng/L		98	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	24.8		ng/L		99	70 - 130

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QC Sample Results

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

Job ID: 380-220626-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: 380-220625-E-1-A MS

Matrix: Water

Analysis Batch: 235757

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 235413

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec		
	Result	Qualifier	Added	Result	Qualifier			Limits	Limits		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	25.3		ng/L		101	70 - 130		
Perfluorohexanoic acid (PFHxA)	2.1		25.1	26.8		ng/L		98	70 - 130		
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	24.7		ng/L		98	70 - 130		
Perfluorooctanoic acid (PFOA)	<2.0		25.1	27.1		ng/L		103	70 - 130		
Perfluorodecanoic acid (PFDA)	<2.0		25.1	23.8		ng/L		95	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)	2.5		25.1	28.9		ng/L		105	70 - 130		
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.1	27.8		ng/L		107	70 - 130		
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	24.5		ng/L		95	70 - 130		
Perfluorononanoic acid (PFNA)	<2.0		25.1	25.4		ng/L		101	70 - 130		
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	21.6		ng/L		86	70 - 130		
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	25.0		ng/L		100	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.1	25.7		ng/L		102	70 - 130		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.1	25.8		ng/L		103	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.1	24.9		ng/L		99	70 - 130		

Lab Sample ID: 380-220625-F-1-A MSD

Matrix: Water

Analysis Batch: 235757

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 235413

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.2	23.4		ng/L		93	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.2	25.2		ng/L		98	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.2	26.2		ng/L		104	70 - 130	7	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.2	24.7		ng/L		98	70 - 130	0	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.2	24.8		ng/L		99	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	2.1		25.2	28.6		ng/L		105	70 - 130	7	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.2	25.2		ng/L		100	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	<2.0		25.2	27.5		ng/L		104	70 - 130	2	30
Perfluorodecanoic acid (PFDA)	<2.0		25.2	25.7		ng/L		102	70 - 130	8	30

Eurofins Pomona

QC Sample Results

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

Job ID: 380-220626-1
SDG: Site S1 PFAS 533/537.1

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

Lab Sample ID: 380-220625-F-1-A MSD

Matrix: Water

Analysis Batch: 235757

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 235413

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	2.5		25.2	28.6		ng/L		104	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.2	26.6		ng/L		102	70 - 130	4	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.2	26.7		ng/L		104	70 - 130	9	30
Perfluorononanoic acid (PFNA)	<2.0		25.2	27.3		ng/L		108	70 - 130	7	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.2	21.9		ng/L		87	70 - 130	1	30
Perfluorotridecanoic acid (PFTTrDA)	<2.0		25.2	25.9		ng/L		103	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.2	25.1		ng/L		100	70 - 130	2	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.2	24.7		ng/L		98	70 - 130	4	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.2	25.4		ng/L		101	70 - 130	2	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
d5-NEtFOSAA	105		70 - 130								
13C2 PFHxA	109		70 - 130								
13C2 PFDA	106		70 - 130								
13C3-GenX	100		70 - 130								

QC Association Summary

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

Job ID: 380-220626-1
SDG: Site S1 PFAS 533/537.1

LCMS

Prep Batch: 235413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-220626-1	BWS2153-S1-AQ	Total/NA	Water	537.1 DW	
380-220626-2	BWS2153-S1-FB	Total/NA	Water	537.1 DW	
MBL 380-235413/19-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-235413/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-235413/20-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-220625-E-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-220625-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Prep Batch: 235471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-220626-1	BWS2153-S1-AQ	Total/NA	Water	533	
380-220626-2	BWS2153-S1-FB	Total/NA	Water	533	
MBL 380-235471/20-A	Method Blank	Total/NA	Water	533	
LCS 380-235471/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-235471/21-A	Lab Control Sample	Total/NA	Water	533	
380-220625-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-220625-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 235609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-220626-1	BWS2153-S1-AQ	Total/NA	Water	533	235471
380-220626-2	BWS2153-S1-FB	Total/NA	Water	533	235471
MBL 380-235471/20-A	Method Blank	Total/NA	Water	533	235471
LCS 380-235471/22-A	Lab Control Sample	Total/NA	Water	533	235471
MRL 380-235471/21-A	Lab Control Sample	Total/NA	Water	533	235471
380-220625-B-1-A MS	Matrix Spike	Total/NA	Water	533	235471
380-220625-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	235471

Analysis Batch: 235757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-220626-1	BWS2153-S1-AQ	Total/NA	Water	EPA 537.1 V2	235413
380-220626-2	BWS2153-S1-FB	Total/NA	Water	EPA 537.1 V2	235413
MBL 380-235413/19-A	Method Blank	Total/NA	Water	EPA 537.1 V2	235413
LCS 380-235413/21-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	235413
MRL 380-235413/20-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	235413
380-220625-E-1-A MS	Matrix Spike	Total/NA	Water	EPA 537.1 V2	235413
380-220625-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	EPA 537.1 V2	235413

Lab Chronicle

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

Job ID: 380-220626-1
SDG: Site S1 PFAS 533/537.1

Client Sample ID: BWS2153-S1-AQ

Lab Sample ID: 380-220626-1

Date Collected: 06/17/26 09:00

Matrix: Water

Date Received: 06/18/26 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			235471	E2HD	EA POM	06/22/26 15:55
Total/NA	Analysis	533		1	235609	SZ9R	EA POM	06/23/26 09:43
Total/NA	Prep	537.1 DW			235413	G9MN	EA POM	06/23/26 02:30
Total/NA	Analysis	EPA 537.1 V2		1	235757	SZ9R	EA POM	06/23/26 20:16

Client Sample ID: BWS2153-S1-FB

Lab Sample ID: 380-220626-2

Date Collected: 06/17/26 09:00

Matrix: Water

Date Received: 06/18/26 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			235471	E2HD	EA POM	06/22/26 15:55
Total/NA	Analysis	533		1	235609	SZ9R	EA POM	06/23/26 09:53
Total/NA	Prep	537.1 DW			235413	G9MN	EA POM	06/23/26 02:30
Total/NA	Analysis	EPA 537.1 V2		1	235757	SZ9R	EA POM	06/23/26 20:26

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: 380-220626-1
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: 380-220626-1
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: 380-220626-1
SDG: Site S1 PFAS 533/537.1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-220626-1	BWS2153-S1-AQ	Water	06/17/26 09:00	06/18/26 09:43	Hawaii
380-220626-2	BWS2153-S1-FB	Water	06/17/26 09:00	06/18/26 09:43	Hawaii

Chain of Custody Record

[illegible]

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-220626-1
SDG Number: Site S1 PFAS 533/537.1

Login Number: 220626

List Number: 1

Creator: Del Rosario, Michael

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	