

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Erwin Kawata
City & County of Honolulu
630 South Beretania Street
Public Service Bldg. Room 310
Honolulu, Hawaii 96843

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JOB DESCRIPTION

INTERA - Red-Hill-Incident
Site D2 PFAS 533/537.1

JOB NUMBER

380-224594-1

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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
Maria Lopez, Project Manager
Maria.Lopez@et.eurofinsus.com
(626)386-1145

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Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Detection Summary	6
Client Sample Results	7
Action Limit Summary	11
Surrogate Summary	12
Isotope Dilution Summary	13
QC Sample Results	14
QC Association Summary	25
Lab Chronicle	26
Certification Summary	27
Method Summary	28
Sample Summary	29
Chain of Custody	30
Receipt Checklists	31



Definitions/Glossary

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

Job ID: 380-224594-1
SDG: Site D2 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: 380-224594-1

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Job Narrative 380-224594-1

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

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

Receipt

The samples were received on 7/14/2026 10:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C.

PFAS

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

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Detection Summary

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

Job ID: 380-224594-1
SDG: Site D2 PFAS 533/537.1

Client Sample ID: BWS2254-D2-AQ

Lab Sample ID: 380-224594-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	9.8		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.8		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.7		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	9.3		2.0	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: BWS2254-D2-FB

Lab Sample ID: 380-224594-2

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: 380-224594-1
SDG: Site D2 PFAS 533/537.1

Client Sample ID: BWS2254-D2-AQ

Lab Sample ID: 380-224594-1

Date Collected: 07/13/26 11:00

Matrix: Water

Date Received: 07/14/26 10:10

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
Perfluorohexanesulfonic acid (PFHxS)	9.8		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
Perfluorooctanoic acid (PFOA)	3.8		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:14	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	98		50 - 200			07/16/26 14:13	07/17/26 18:14	1
13C6 PFDA	109		50 - 200			07/16/26 14:13	07/17/26 18:14	1
13C5 PFHxA	100		50 - 200			07/16/26 14:13	07/17/26 18:14	1
13C4 PFHpA	106		50 - 200			07/16/26 14:13	07/17/26 18:14	1
13C8 PFOA	106		50 - 200			07/16/26 14:13	07/17/26 18:14	1
13C9 PFNA	104		50 - 200			07/16/26 14:13	07/17/26 18:14	1
13C7 PFUnA	102		50 - 200			07/16/26 14:13	07/17/26 18:14	1
13C2 PFDoA	101		50 - 200			07/16/26 14:13	07/17/26 18:14	1
13C4 PFBA	109		50 - 200			07/16/26 14:13	07/17/26 18:14	1
13C5 PFPeA	126		50 - 200			07/16/26 14:13	07/17/26 18:14	1
13C3 PFBS	105		50 - 200			07/16/26 14:13	07/17/26 18:14	1
13C3 PFHxS	97		50 - 200			07/16/26 14:13	07/17/26 18:14	1
13C8 PFOS	100		50 - 200			07/16/26 14:13	07/17/26 18:14	1

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Client Sample Results

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

Job ID: 380-224594-1
SDG: Site D2 PFAS 533/537.1

Client Sample ID: BWS2254-D2-AQ

Lab Sample ID: 380-224594-1

Date Collected: 07/13/26 11:00

Matrix: Water

Date Received: 07/14/26 10:10

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	126		50 - 200	07/16/26 14:13	07/17/26 18:14	1
13C2-6:2-FTS	111		50 - 200	07/16/26 14:13	07/17/26 18:14	1
13C2-8:2-FTS	109		50 - 200	07/16/26 14:13	07/17/26 18:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:11	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:11	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:11	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:11	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:11	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:11	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:11	1
Perfluorooctanoic acid (PFOA)	3.7		2.0	ng/L		07/16/26 12:45	07/17/26 14:11	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:11	1
Perfluorohexanesulfonic acid (PFHxS)	9.3		2.0	ng/L		07/16/26 12:45	07/17/26 14:11	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:11	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:11	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:11	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:11	1
Perfluorotridecanoic acid (PFTDA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:11	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9CI-PF3ONS)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:11	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	101		70 - 130			07/16/26 12:45	07/17/26 14:11	1
13C2 PFHxA	103		70 - 130			07/16/26 12:45	07/17/26 14:11	1
13C2 PFDA	103		70 - 130			07/16/26 12:45	07/17/26 14:11	1
13C3-GenX	98		70 - 130			07/16/26 12:45	07/17/26 14:11	1

Client Sample ID: BWS2254-D2-FB

Lab Sample ID: 380-224594-2

Date Collected: 07/13/26 11:00

Matrix: Water

Date Received: 07/14/26 10:10

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		07/16/26 14:13	07/17/26 18:33	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9CI-PF3ONS)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1

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Client Sample Results

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

Job ID: 380-224594-1
SDG: Site D2 PFAS 533/537.1

Client Sample ID: BWS2254-D2-FB

Lab Sample ID: 380-224594-2

Date Collected: 07/13/26 11:00

Matrix: Water

Date Received: 07/14/26 10:10

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		07/16/26 14:13	07/17/26 18:33	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	82		50 - 200	07/16/26 14:13	07/17/26 18:33	1
13C6 PFDA	109		50 - 200	07/16/26 14:13	07/17/26 18:33	1
13C5 PFHxA	95		50 - 200	07/16/26 14:13	07/17/26 18:33	1
13C4 PFHpA	93		50 - 200	07/16/26 14:13	07/17/26 18:33	1
13C8 PFOA	102		50 - 200	07/16/26 14:13	07/17/26 18:33	1
13C9 PFNA	101		50 - 200	07/16/26 14:13	07/17/26 18:33	1
13C7 PFUnA	102		50 - 200	07/16/26 14:13	07/17/26 18:33	1
13C2 PFDoA	106		50 - 200	07/16/26 14:13	07/17/26 18:33	1
13C4 PFBA	94		50 - 200	07/16/26 14:13	07/17/26 18:33	1
13C5 PFPeA	94		50 - 200	07/16/26 14:13	07/17/26 18:33	1
13C3 PFBS	105		50 - 200	07/16/26 14:13	07/17/26 18:33	1
13C3 PFHxS	95		50 - 200	07/16/26 14:13	07/17/26 18:33	1
13C8 PFOS	100		50 - 200	07/16/26 14:13	07/17/26 18:33	1
13C2-4:2-FTS	109		50 - 200	07/16/26 14:13	07/17/26 18:33	1
13C2-6:2-FTS	104		50 - 200	07/16/26 14:13	07/17/26 18:33	1
13C2-8:2-FTS	103		50 - 200	07/16/26 14:13	07/17/26 18:33	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:20	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:20	1

Eurofins Pomona

Client Sample Results

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

Job ID: 380-224594-1
SDG: Site D2 PFAS 533/537.1

Client Sample ID: BWS2254-D2-FB

Lab Sample ID: 380-224594-2

Date Collected: 07/13/26 11:00

Matrix: Water

Date Received: 07/14/26 10:10

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:20	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:20	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:20	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:20	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:20	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:20	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:20	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:20	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:20	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:20	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:20	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:20	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:20	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/16/26 12:45	07/17/26 14:20	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	88		70 - 130			07/16/26 12:45	07/17/26 14:20	1
13C2 PFHxA	95		70 - 130			07/16/26 12:45	07/17/26 14:20	1
13C2 PFDA	101		70 - 130			07/16/26 12:45	07/17/26 14:20	1
13C3-GenX	84		70 - 130			07/16/26 12:45	07/17/26 14:20	1

Action Limit Summary

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

Job ID: 380-224594-1
SDG: Site D2 PFAS 533/537.1

Client Sample ID: BWS2254-D2-AQ

Lab Sample ID: 380-224594-1

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	9.8		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)	3.8		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)	3.7		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	9.3		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: BWS2254-D2-FB

Lab Sample ID: 380-224594-2

Compliance Check

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

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

Surrogate Summary

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

Job ID: 380-224594-1
SDG: Site D2 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)
380-224594-1	BWS2254-D2-AQ	101	103	103	98
380-224594-2	BWS2254-D2-FB	88	95	101	84
380-224669-E-1-A MS	Matrix Spike	106	111	106	104
380-224669-F-1-A MSD	Matrix Spike Duplicate	104	104	101	99
LCS 380-240248/22-A	Lab Control Sample	101	97	100	86
MBL 380-240248/20-A	Method Blank	104	110	102	104
MRL 380-240248/21-A	Lab Control Sample	99	104	112	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: 380-224594-1
SDG: Site D2 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)
380-224594-1	BWS2254-D2-AQ	98	109	100	106	106	104	102	101
380-224594-2	BWS2254-D2-FB	82	109	95	93	102	101	102	106
380-224807-B-1-A MS	Matrix Spike	109	113	113	112	106	107	107	112
380-224807-C-1-A MSD	Matrix Spike Duplicate	80	97	90	91	87	87	92	99
LCS 380-240276/22-A	Lab Control Sample	78	99	84	87	86	88	93	101
MBL 380-240276/20-A	Method Blank	85	105	96	97	100	98	100	103
MRL 380-240276/21-A	Lab Control Sample	82	107	96	90	97	97	100	105

		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)
380-224594-1	BWS2254-D2-AQ	109	126	105	97	100	126	111	109
380-224594-2	BWS2254-D2-FB	94	94	105	95	100	109	104	103
380-224807-B-1-A MS	Matrix Spike	111	110	108	94	100	105	101	104
380-224807-C-1-A MSD	Matrix Spike Duplicate	91	87	104	97	99	102	99	104
LCS 380-240276/22-A	Lab Control Sample	89	84	104	100	101	104	103	103
MBL 380-240276/20-A	Method Blank	99	94	101	98	106	107	105	116
MRL 380-240276/21-A	Lab Control Sample	92	90	102	98	103	111	99	104

Surrogate Legend

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

QC Sample Results

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

Job ID: 380-224594-1
SDG: Site D2 PFAS 533/537.1

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

Lab Sample ID: MBL 380-240276/20-A

Matrix: Water

Analysis Batch: 240631

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 240276

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<0.29		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	<0.29		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.59		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<0.98		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
Perfluorobutanesulfonic acid (PFBS)	<0.36		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
Perfluorodecanoic acid (PFDA)	<0.30		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
Perfluorododecanoic acid (PFDoA)	<0.53		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
Perfluoroheptanoic acid (PFHpA)	<0.38		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
Perfluorohexanesulfonic acid (PFHxS)	<0.31		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
Perfluorohexanoic acid (PFHxA)	<0.45		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
Perfluorononanoic acid (PFNA)	<0.39		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
Perfluorooctanesulfonic acid (PFOS)	<0.42		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
Perfluorooctanoic acid (PFOA)	<0.37		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
Perfluoroundecanoic acid (PFUnA)	<0.41		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
Perfluorobutanoic acid (PFBA)	<0.67		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.37		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.36		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.47		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.46		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.24		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.45		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
Perfluoropentanoic acid (PFPeA)	<0.37		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.35		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1
Perfluoropentanesulfonic acid (PFPeS)	<0.38		2.0	ng/L		07/16/26 14:13	07/17/26 16:00	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	85		50 - 200	07/16/26 14:13	07/17/26 16:00	1
13C6 PFDA	105		50 - 200	07/16/26 14:13	07/17/26 16:00	1
13C5 PFHxA	96		50 - 200	07/16/26 14:13	07/17/26 16:00	1
13C4 PFHpA	97		50 - 200	07/16/26 14:13	07/17/26 16:00	1
13C8 PFOA	100		50 - 200	07/16/26 14:13	07/17/26 16:00	1
13C9 PFNA	98		50 - 200	07/16/26 14:13	07/17/26 16:00	1
13C7 PFUnA	100		50 - 200	07/16/26 14:13	07/17/26 16:00	1
13C2 PFDoA	103		50 - 200	07/16/26 14:13	07/17/26 16:00	1
13C4 PFBA	99		50 - 200	07/16/26 14:13	07/17/26 16:00	1
13C5 PFPeA	94		50 - 200	07/16/26 14:13	07/17/26 16:00	1
13C3 PFBS	101		50 - 200	07/16/26 14:13	07/17/26 16:00	1
13C3 PFHxS	98		50 - 200	07/16/26 14:13	07/17/26 16:00	1

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QC Sample Results

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

Job ID: 380-224594-1
SDG: Site D2 PFAS 533/537.1

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

Lab Sample ID: MBL 380-240276/20-A

Matrix: Water

Analysis Batch: 240631

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 240276

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	106		50 - 200	07/16/26 14:13	07/17/26 16:00	1
13C2-4:2-FTS	107		50 - 200	07/16/26 14:13	07/17/26 16:00	1
13C2-6:2-FTS	105		50 - 200	07/16/26 14:13	07/17/26 16:00	1
13C2-8:2-FTS	116		50 - 200	07/16/26 14:13	07/17/26 16:00	1

Lab Sample ID: LCS 380-240276/22-A

Matrix: Water

Analysis Batch: 240631

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 240276

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	118	120		ng/L		101	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	118	118		ng/L		100	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	118	104		ng/L		88	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	118	121		ng/L		103	70 - 130
Perfluorobutanesulfonic acid (PFBS)	118	115		ng/L		97	70 - 130
Perfluorodecanoic acid (PFDA)	118	105		ng/L		89	70 - 130
Perfluorododecanoic acid (PFDoA)	118	117		ng/L		99	70 - 130
Perfluorooheptanoic acid (PFHpA)	118	110		ng/L		94	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	118	118		ng/L		100	70 - 130
Perfluorohexanoic acid (PFHxA)	118	118		ng/L		100	70 - 130
Perfluorononanoic acid (PFNA)	118	115		ng/L		98	70 - 130
Perfluorooctanesulfonic acid (PFOS)	118	118		ng/L		100	70 - 130
Perfluorooctanoic acid (PFOA)	118	112		ng/L		95	70 - 130
Perfluoroundecanoic acid (PFUnA)	118	117		ng/L		100	70 - 130
Perfluorobutanoic acid (PFBA)	118	113		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	118	124		ng/L		105	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	118	120		ng/L		102	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	118	118		ng/L		100	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	118	98.9		ng/L		84	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	118	143		ng/L		121	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	118	114		ng/L		96	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	118	111		ng/L		94	70 - 130
Perfluoropentanoic acid (PFPeA)	118	116		ng/L		99	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	118	120		ng/L		102	70 - 130

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QC Sample Results

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

Job ID: 380-224594-1
SDG: Site D2 PFAS 533/537.1

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

Lab Sample ID: LCS 380-240276/22-A

Matrix: Water

Analysis Batch: 240631

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 240276

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	118	114		ng/L		97	70 - 130
	LCS	LCS					
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	78		50 - 200				
13C6 PFDA	99		50 - 200				
13C5 PFHxA	84		50 - 200				
13C4 PFHpA	87		50 - 200				
13C8 PFOA	86		50 - 200				
13C9 PFNA	88		50 - 200				
13C7 PFUnA	93		50 - 200				
13C2 PFDoA	101		50 - 200				
13C4 PFBA	89		50 - 200				
13C5 PFPeA	84		50 - 200				
13C3 PFBS	104		50 - 200				
13C3 PFHxS	100		50 - 200				
13C8 PFOS	101		50 - 200				
13C2-4:2-FTS	104		50 - 200				
13C2-6:2-FTS	103		50 - 200				
13C2-8:2-FTS	103		50 - 200				

Lab Sample ID: MRL 380-240276/21-A

Matrix: Water

Analysis Batch: 240631

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 240276

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.96	1.77	J	ng/L		90	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	1.96	1.93	J	ng/L		98	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.96	1.92	J	ng/L		97	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	1.96	1.92	J	ng/L		98	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.96	2.01	J	ng/L		102	50 - 150
Perfluorodecanoic acid (PFDA)	1.96	1.81	J	ng/L		92	50 - 150
Perfluorododecanoic acid (PFDoA)	1.96	2.03	J	ng/L		103	50 - 150
Perfluoroheptanoic acid (PFHpA)	1.96	2.03	J	ng/L		103	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.96	2.04	J	ng/L		104	50 - 150
Perfluorohexanoic acid (PFHxA)	1.96	1.83	J	ng/L		93	50 - 150
Perfluorononanoic acid (PFNA)	1.96	2.02	J	ng/L		103	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.96	2.00	J	ng/L		102	50 - 150
Perfluorooctanoic acid (PFOA)	1.96	1.93	J	ng/L		98	50 - 150
Perfluoroundecanoic acid (PFUnA)	1.96	2.09	J	ng/L		107	50 - 150
Perfluorobutanoic acid (PFBA)	1.96	2.29	J	ng/L		117	50 - 150

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QC Sample Results

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

Job ID: 380-224594-1
SDG: Site D2 PFAS 533/537.1

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

Lab Sample ID: MRL 380-240276/21-A

Matrix: Water

Analysis Batch: 240631

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 240276

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.96	2.24	J	ng/L		114	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.96	2.28	J	ng/L		116	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.96	2.33	J	ng/L		119	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	1.96	1.80	J	ng/L		92	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	1.96	2.12	J	ng/L		108	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	1.96	1.83	J	ng/L		93	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	1.96	1.85	J	ng/L		94	50 - 150
Perfluoropentanoic acid (PFPeA)	1.96	2.05	J	ng/L		104	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	1.96	2.07	J	ng/L		105	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	1.96	2.03	J	ng/L		103	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits
13C3 HFPO-DA	82		50 - 200
13C6 PFDA	107		50 - 200
13C5 PFHxA	96		50 - 200
13C4 PFHpA	90		50 - 200
13C8 PFOA	97		50 - 200
13C9 PFNA	97		50 - 200
13C7 PFUnA	100		50 - 200
13C2 PFDoA	105		50 - 200
13C4 PFBA	92		50 - 200
13C5 PFPeA	90		50 - 200
13C3 PFBS	102		50 - 200
13C3 PFHxS	98		50 - 200
13C8 PFOS	103		50 - 200
13C2-4:2-FTS	111		50 - 200
13C2-6:2-FTS	99		50 - 200
13C2-8:2-FTS	104		50 - 200

Lab Sample ID: 380-224807-B-1-A MS

Matrix: Water

Analysis Batch: 240631

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 240276

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		59.2	60.7		ng/L		103	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		59.2	60.4		ng/L		102	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		59.2	56.0		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: 380-224594-1
SDG: Site D2 PFAS 533/537.1

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

Lab Sample ID: 380-224807-B-1-A MS

Matrix: Water

Analysis Batch: 240631

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 240276

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		59.2	59.6		ng/L		101	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		59.2	56.1		ng/L		95	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		59.2	57.6		ng/L		97	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		59.2	59.0		ng/L		100	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		59.2	57.3		ng/L		97	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		59.2	64.7		ng/L		109	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		59.2	58.3		ng/L		96	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		59.2	59.4		ng/L		100	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		59.2	61.2		ng/L		103	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		59.2	59.4		ng/L		100	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		59.2	60.2		ng/L		102	70 - 130
Perfluorobutanoic acid (PFBA)	2.8		59.2	59.3		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		59.2	61.1		ng/L		103	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		59.2	64.9		ng/L		110	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		59.2	62.2		ng/L		105	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		59.2	49.9		ng/L		84	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		59.2	53.7		ng/L		91	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		59.2	57.5		ng/L		97	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		59.2	58.0		ng/L		98	70 - 130
Perfluoropentanoic acid (PFPeA)	2.1		59.2	60.7		ng/L		99	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		59.2	62.3		ng/L		105	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		59.2	63.8		ng/L		108	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	MS Limits
13C3 HFPO-DA	109		50 - 200
13C6 PFDA	113		50 - 200
13C5 PFHxA	113		50 - 200
13C4 PFHpA	112		50 - 200
13C8 PFOA	106		50 - 200
13C9 PFNA	107		50 - 200
13C7 PFUnA	107		50 - 200
13C2 PFDoA	112		50 - 200
13C4 PFBA	111		50 - 200
13C5 PFPeA	110		50 - 200
13C3 PFBS	108		50 - 200
13C3 PFHxS	94		50 - 200
13C8 PFOS	100		50 - 200

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QC Sample Results

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

Job ID: 380-224594-1
SDG: Site D2 PFAS 533/537.1

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

Lab Sample ID: 380-224807-B-1-A MS

Matrix: Water

Analysis Batch: 240631

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 240276

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	105		50 - 200
13C2-6:2-FTS	101		50 - 200
13C2-8:2-FTS	104		50 - 200

Lab Sample ID: 380-224807-C-1-A MSD

Matrix: Water

Analysis Batch: 240631

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 240276

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		59.2	59.4		ng/L		100	70 - 130	2	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		59.2	62.8		ng/L		106	70 - 130	4	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		59.2	54.4		ng/L		92	70 - 130	3	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		59.2	57.5		ng/L		97	70 - 130	4	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		59.2	58.4		ng/L		99	70 - 130	4	30
Perfluorodecanoic acid (PFDA)	<2.0		59.2	55.4		ng/L		94	70 - 130	4	30
Perfluorododecanoic acid (PFDoA)	<2.0		59.2	58.3		ng/L		98	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		59.2	57.0		ng/L		96	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		59.2	61.8		ng/L		104	70 - 130	5	30
Perfluorohexanoic acid (PFHxA)	<2.0		59.2	58.6		ng/L		97	70 - 130	1	30
Perfluorononanoic acid (PFNA)	<2.0		59.2	60.4		ng/L		102	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		59.2	60.5		ng/L		102	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		59.2	57.6		ng/L		97	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		59.2	58.9		ng/L		100	70 - 130	2	30
Perfluorobutanoic acid (PFBA)	2.8		59.2	55.0		ng/L		88	70 - 130	7	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		59.2	62.4		ng/L		105	70 - 130	2	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		59.2	61.9		ng/L		105	70 - 130	5	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		59.2	59.7		ng/L		101	70 - 130	4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		59.2	48.6		ng/L		82	70 - 130	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		59.2	67.2		ng/L		113	70 - 130	22	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		59.2	58.5		ng/L		99	70 - 130	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		59.2	57.1		ng/L		96	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)	2.1		59.2	61.9		ng/L		101	70 - 130	2	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		59.2	63.4		ng/L		107	70 - 130	2	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		59.2	60.8		ng/L		103	70 - 130	5	30

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QC Sample Results

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

Job ID: 380-224594-1
SDG: Site D2 PFAS 533/537.1

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

Isotope Dilution	MSD MSD		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	80		50 - 200
13C6 PFDA	97		50 - 200
13C5 PFHxA	90		50 - 200
13C4 PFHpA	91		50 - 200
13C8 PFOA	87		50 - 200
13C9 PFNA	87		50 - 200
13C7 PFUnA	92		50 - 200
13C2 PFDoA	99		50 - 200
13C4 PFBA	91		50 - 200
13C5 PFPeA	87		50 - 200
13C3 PFBS	104		50 - 200
13C3 PFHxS	97		50 - 200
13C8 PFOS	99		50 - 200
13C2-4:2-FTS	102		50 - 200
13C2-6:2-FTS	99		50 - 200
13C2-8:2-FTS	104		50 - 200

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

Lab Sample ID: MBL 380-240248/20-A
Matrix: Water
Analysis Batch: 240573

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 240248

Analyte	MBL MBL		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<0.98		2.0	ng/L		07/16/26 12:45	07/17/26 11:17	1
Perfluorooctanesulfonic acid (PFOS)	<0.42		2.0	ng/L		07/16/26 12:45	07/17/26 11:17	1
Perfluoroundecanoic acid (PFUnA)	<0.41		2.0	ng/L		07/16/26 12:45	07/17/26 11:17	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.57		2.0	ng/L		07/16/26 12:45	07/17/26 11:17	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.41		2.0	ng/L		07/16/26 12:45	07/17/26 11:17	1
Perfluorohexanoic acid (PFHxA)	<0.45		2.0	ng/L		07/16/26 12:45	07/17/26 11:17	1
Perfluorododecanoic acid (PFDoA)	<0.53		2.0	ng/L		07/16/26 12:45	07/17/26 11:17	1
Perfluorooctanoic acid (PFOA)	<0.37		2.0	ng/L		07/16/26 12:45	07/17/26 11:17	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		07/16/26 12:45	07/17/26 11:17	1
Perfluorohexanesulfonic acid (PFHxS)	<0.31		2.0	ng/L		07/16/26 12:45	07/17/26 11:17	1
Perfluorobutanesulfonic acid (PFBS)	<0.36		2.0	ng/L		07/16/26 12:45	07/17/26 11:17	1
Perfluoroheptanoic acid (PFHpA)	<0.38		2.0	ng/L		07/16/26 12:45	07/17/26 11:17	1
Perfluorononanoic acid (PFNA)	<0.39		2.0	ng/L		07/16/26 12:45	07/17/26 11:17	1
Perfluorotetradecanoic acid (PFTA)	<0.53		2.0	ng/L		07/16/26 12:45	07/17/26 11:17	1
Perfluorotridecanoic acid (PFTTrDA)	<0.35		2.0	ng/L		07/16/26 12:45	07/17/26 11:17	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.30		2.0	ng/L		07/16/26 12:45	07/17/26 11:17	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.29		2.0	ng/L		07/16/26 12:45	07/17/26 11:17	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.59		2.0	ng/L		07/16/26 12:45	07/17/26 11:17	1
Surrogate	MBL MBL		Limits			Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
d5-NEtFOSAA	104		70 - 130			07/16/26 12:45	07/17/26 11:17	1
13C2 PFHxA	110		70 - 130			07/16/26 12:45	07/17/26 11:17	1
13C2 PFDA	102		70 - 130			07/16/26 12:45	07/17/26 11:17	1

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QC Sample Results

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

Job ID: 380-224594-1
SDG: Site D2 PFAS 533/537.1

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

Lab Sample ID: MBL 380-240248/20-A

Matrix: Water

Analysis Batch: 240573

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 240248

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-GenX	104		70 - 130	07/16/26 12:45	07/17/26 11:17	1

Lab Sample ID: LCS 380-240248/22-A

Matrix: Water

Analysis Batch: 240573

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 240248

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	49.2	38.7		ng/L		79	70 - 130
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	49.2	47.7		ng/L		97	70 - 130
Perfluoroundecanoic acid (PFUnA)	49.2	45.7		ng/L		93	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	49.2	45.4		ng/L		92	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	49.2	44.2		ng/L		90	70 - 130
Perfluorohexanoic acid (PFHxA)	49.2	42.3		ng/L		86	70 - 130
Perfluorododecanoic acid (PFDoA)	49.2	45.4		ng/L		92	70 - 130
Perfluorooctanoic acid (PFOA)	49.2	43.6		ng/L		89	70 - 130
Perfluorodecanoic acid (PFDA)	49.2	42.8		ng/L		87	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	49.2	45.9		ng/L		93	70 - 130
Perfluorobutanesulfonic acid (PFBS)	49.2	46.7		ng/L		95	70 - 130
Perfluoroheptanoic acid (PFHpA)	49.2	43.5		ng/L		88	70 - 130
Perfluorononanoic acid (PFNA)	49.2	44.7		ng/L		91	70 - 130
Perfluorotetradecanoic acid (PFTA)	49.2	49.4		ng/L		100	70 - 130
Perfluorotridecanoic acid (PFTrDA)	49.2	48.2		ng/L		98	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	49.2	45.3		ng/L		92	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	49.2	47.0		ng/L		96	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	49.2	40.3		ng/L		82	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	101		70 - 130
13C2 PFHxA	97		70 - 130
13C2 PFDA	100		70 - 130
13C3-GenX	86		70 - 130

QC Sample Results

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

Job ID: 380-224594-1
SDG: Site D2 PFAS 533/537.1

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

Lab Sample ID: MRL 380-240248/21-A

Matrix: Water

Analysis Batch: 240573

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 240248

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	1.97	1.61	J	ng/L		82	50 - 150
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	1.97	1.80	J	ng/L		91	50 - 150
Perfluoroundecanoic acid (PFUnA)	1.97	1.94	J	ng/L		98	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.97	1.69	J	ng/L		86	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.97	1.91	J	ng/L		97	50 - 150
Perfluorohexanoic acid (PFHxA)	1.97	1.72	J	ng/L		87	50 - 150
Perfluorododecanoic acid (PFDoA)	1.97	1.97	J	ng/L		100	50 - 150
Perfluorooctanoic acid (PFOA)	1.97	1.80	J	ng/L		91	50 - 150
Perfluorodecanoic acid (PFDA)	1.97	1.80	J	ng/L		92	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.97	1.69	J	ng/L		86	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.97	1.63	J	ng/L		83	50 - 150
Perfluoroheptanoic acid (PFHpA)	1.97	1.73	J	ng/L		88	50 - 150
Perfluorononanoic acid (PFNA)	1.97	1.99	J	ng/L		101	50 - 150
Perfluorotetradecanoic acid (PFTA)	1.97	2.17	J	ng/L		110	50 - 150
Perfluorotridecanoic acid (PFTrDA)	1.97	2.08	J	ng/L		106	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	1.97	1.68	J	ng/L		86	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.97	1.66	J	ng/L		84	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.97	1.67	J	ng/L		85	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	99		70 - 130
13C2 PFHxA	104		70 - 130
13C2 PFDA	112		70 - 130
13C3-GenX	94		70 - 130

Lab Sample ID: 380-224669-E-1-A MS

Matrix: Water

Analysis Batch: 240573

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 240248

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		24.7	23.6		ng/L		96	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorooctanesulfonic acid (PFOS)	3.0		24.7	27.0		ng/L		97	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		24.7	24.3		ng/L		98	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		24.7	24.6		ng/L		100	70 - 130

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QC Sample Results

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

Job ID: 380-224594-1
SDG: Site D2 PFAS 533/537.1

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

Lab Sample ID: 380-224669-E-1-A MS

Matrix: Water

Analysis Batch: 240573

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 240248

	Sample	Sample	Spike	MS	MS			%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
N-ethylperfluorooctanesulfonami doacetic acid (NEtFOSAA)	<2.0		24.7	24.8		ng/L		101	70 - 130	
Perfluorohexanoic acid (PFHxA)	<2.0		24.7	26.6		ng/L		108	70 - 130	
Perfluorododecanoic acid (PFDoA)	<2.0		24.7	24.5		ng/L		99	70 - 130	
Perfluorooctanoic acid (PFOA)	<2.0		24.7	25.4		ng/L		100	70 - 130	
Perfluorodecanoic acid (PFDA)	<2.0		24.7	22.9		ng/L		93	70 - 130	
Perfluorohexanesulfonic acid (PFHxS)	2.7		24.7	26.6		ng/L		97	70 - 130	
Perfluorobutanesulfonic acid (PFBS)	<2.0		24.7	25.4		ng/L		100	70 - 130	
Perfluoroheptanoic acid (PFHpA)	<2.0		24.7	24.7		ng/L		100	70 - 130	
Perfluorononanoic acid (PFNA)	<2.0		24.7	24.4		ng/L		99	70 - 130	
Perfluorotetradecanoic acid (PFTA)	<2.0		24.7	25.6		ng/L		104	70 - 130	
Perfluorotridecanoic acid (PFTrDA)	<2.0		24.7	25.3		ng/L		103	70 - 130	
9-Chlorohexadecafluoro-3-oxan onane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		24.7	23.4		ng/L		95	70 - 130	
11-Chloroeicosafluoro-3-oxaund ecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		24.7	23.2		ng/L		94	70 - 130	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		24.7	24.5		ng/L		99	70 - 130	

Lab Sample ID: 380-224669-F-1-A MSD

Matrix: Water

Analysis Batch: 240573

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 240248

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		24.7	23.2		ng/L		94	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	3.0		24.7	26.9		ng/L		97	70 - 130	0	30
Perfluoroundecanoic acid (PFUnA)	<2.0		24.7	24.4		ng/L		99	70 - 130	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		24.7	23.6		ng/L		95	70 - 130	4	30
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	<2.0		24.7	23.7		ng/L		96	70 - 130	4	30
Perfluorohexanoic acid (PFHxA)	<2.0		24.7	25.4		ng/L		103	70 - 130	5	30
Perfluorododecanoic acid (PFDoA)	<2.0		24.7	24.5		ng/L		99	70 - 130	0	30
Perfluorooctanoic acid (PFOA)	<2.0		24.7	24.2		ng/L		95	70 - 130	5	30
Perfluorodecanoic acid (PFDA)	<2.0		24.7	23.7		ng/L		96	70 - 130	4	30

Eurofins Pomona

QC Sample Results

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

Job ID: 380-224594-1
SDG: Site D2 PFAS 533/537.1

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

Lab Sample ID: 380-224669-F-1-A MSD

Matrix: Water

Analysis Batch: 240573

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 240248

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	2.7		24.7	27.7		ng/L		101	70 - 130	4	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		24.7	24.6		ng/L		96	70 - 130	3	30
Perfluoroheptanoic acid (PFHpA)	<2.0		24.7	24.1		ng/L		98	70 - 130	2	30
Perfluorononanoic acid (PFNA)	<2.0		24.7	25.3		ng/L		103	70 - 130	4	30
Perfluorotetradecanoic acid (PFTA)	<2.0		24.7	25.2		ng/L		102	70 - 130	2	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		24.7	25.5		ng/L		103	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		24.7	23.6		ng/L		96	70 - 130	1	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		24.7	23.8		ng/L		96	70 - 130	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		24.7	23.7		ng/L		96	70 - 130	3	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
d5-NEtFOSAA	104		70 - 130								
13C2 PFHxA	104		70 - 130								
13C2 PFDA	101		70 - 130								
13C3-GenX	99		70 - 130								

QC Association Summary

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

Job ID: 380-224594-1
SDG: Site D2 PFAS 533/537.1

LCMS

Prep Batch: 240248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-224594-1	BWS2254-D2-AQ	Total/NA	Water	537.1 DW	
380-224594-2	BWS2254-D2-FB	Total/NA	Water	537.1 DW	
MBL 380-240248/20-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-240248/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-240248/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-224669-E-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-224669-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Prep Batch: 240276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-224594-1	BWS2254-D2-AQ	Total/NA	Water	533	
380-224594-2	BWS2254-D2-FB	Total/NA	Water	533	
MBL 380-240276/20-A	Method Blank	Total/NA	Water	533	
LCS 380-240276/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-240276/21-A	Lab Control Sample	Total/NA	Water	533	
380-224807-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-224807-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 240573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-224594-1	BWS2254-D2-AQ	Total/NA	Water	EPA 537.1 V2	240248
380-224594-2	BWS2254-D2-FB	Total/NA	Water	EPA 537.1 V2	240248
MBL 380-240248/20-A	Method Blank	Total/NA	Water	EPA 537.1 V2	240248
LCS 380-240248/22-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	240248
MRL 380-240248/21-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	240248
380-224669-E-1-A MS	Matrix Spike	Total/NA	Water	EPA 537.1 V2	240248
380-224669-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	EPA 537.1 V2	240248

Analysis Batch: 240631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-224594-1	BWS2254-D2-AQ	Total/NA	Water	533	240276
380-224594-2	BWS2254-D2-FB	Total/NA	Water	533	240276
MBL 380-240276/20-A	Method Blank	Total/NA	Water	533	240276
LCS 380-240276/22-A	Lab Control Sample	Total/NA	Water	533	240276
MRL 380-240276/21-A	Lab Control Sample	Total/NA	Water	533	240276
380-224807-B-1-A MS	Matrix Spike	Total/NA	Water	533	240276
380-224807-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	240276

Lab Chronicle

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

Job ID: 380-224594-1
SDG: Site D2 PFAS 533/537.1

Client Sample ID: BWS2254-D2-AQ

Lab Sample ID: 380-224594-1

Date Collected: 07/13/26 11:00

Matrix: Water

Date Received: 07/14/26 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			240276	N8NE	EA POM	07/16/26 14:13
Total/NA	Analysis	533		1	240631	Y5FM	EA POM	07/17/26 18:14
Total/NA	Prep	537.1 DW			240248	LM3A	EA POM	07/16/26 12:45
Total/NA	Analysis	EPA 537.1 V2		1	240573	Y5FM	EA POM	07/17/26 14:11

Client Sample ID: BWS2254-D2-FB

Lab Sample ID: 380-224594-2

Date Collected: 07/13/26 11:00

Matrix: Water

Date Received: 07/14/26 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			240276	N8NE	EA POM	07/16/26 14:13
Total/NA	Analysis	533		1	240631	Y5FM	EA POM	07/17/26 18:33
Total/NA	Prep	537.1 DW			240248	LM3A	EA POM	07/16/26 12:45
Total/NA	Analysis	EPA 537.1 V2		1	240573	Y5FM	EA POM	07/17/26 14:20

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: 380-224594-1
SDG: Site D2 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: 380-224594-1
SDG: Site D2 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: 380-224594-1
SDG: Site D2 PFAS 533/537.1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-224594-1	BWS2254-D2-AQ	Water	07/13/26 11:00	07/14/26 10:10	Hawaii
380-224594-2	BWS2254-D2-FB	Water	07/13/26 11:00	07/14/26 10:10	Hawaii

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- 3
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- 15
- 16
- 17

Client Information				City & County of Honolulu				Analysis Requested				Carrier Tracking No(s)				COC No			
Client Contact				City				Due Date Requested				Carrier Tracking No(s)				COC No			
Mr. Erwin Kawata				630 South Beretania Street				TAT Requested (days)				Lopez, Maria				Page 1 of 1			
Phone: 808-748-5066				Standard				Compliance Project: ☐ Yes ☒ No				State of Origin				Page 1 of 1			
Email: ekawata@hbw.org				Project #				PO #				Hawaii				Job #			
INTERA - Red-Hill Incident				38000861				WO #				Maria.Lopez@et.eurofinsus.com				Job #			
Site				SSON#				Matrix				E-Mail				Job #			
D2				Sample Date				Sample Type				Lab PW				Job #			
Sample Identification				Sample Time				Sample Type (C=Comp, G=grab)				Lab PW				Job #			
BWS2254-D2-AQ				11:00				G				Lopez, Maria				Job #			
BWS2254-D2-FB				11:00				G				Maria.Lopez@et.eurofinsus.com				Job #			
Sample Identification				Sample Date				Sample Type				Lab PW				Job #			
BWS2254-D2-AQ				11:00				G				Lopez, Maria				Job #			
BWS2254-D2-FB				11:00				G				Maria.Lopez@et.eurofinsus.com				Job #			
Sample Identification				Sample Date				Sample Type				Lab PW				Job #			
BWS2254-D2-AQ				11:00				G				Lopez, Maria				Job #			
BWS2254-D2-FB				11:00				G				Maria.Lopez@et.eurofinsus.com				Job #			
Sample Identification				Sample Date				Sample Type				Lab PW				Job #			
BWS2254-D2-AQ				11:00				G				Lopez, Maria				Job #			
BWS2254-D2-FB				11:00				G				Maria.Lopez@et.eurofinsus.com				Job #			
Sample Identification				Sample Date				Sample Type				Lab PW				Job #			
BWS2254-D2-AQ				11:00				G				Lopez, Maria				Job #			
BWS2254-D2-FB				11:00				G				Maria.Lopez@et.eurofinsus.com				Job #			
Sample Identification				Sample Date				Sample Type				Lab PW				Job #			
BWS2254-D2-AQ				11:00				G				Lopez, Maria				Job #			
BWS2254-D2-FB				11:00				G				Maria.Lopez@et.eurofinsus.com				Job #			
Sample Identification				Sample Date				Sample Type				Lab PW				Job #			
BWS2254-D2-AQ				11:00				G				Lopez, Maria				Job #			
BWS2254-D2-FB				11:00				G				Maria.Lopez@et.eurofinsus.com				Job #			
Sample Identification				Sample Date				Sample Type				Lab PW				Job #			
BWS2254-D2-AQ				11:00				G				Lopez, Maria				Job #			
BWS2254-D2-FB				11:00				G				Maria.Lopez@et.eurofinsus.com				Job #			
Sample Identification				Sample Date				Sample Type				Lab PW				Job #			
BWS2254-D2-AQ				11:00				G				Lopez, Maria				Job #			
BWS2254-D2-FB				11:00				G				Maria.Lopez@et.eurofinsus.com				Job #			
Sample Identification				Sample Date				Sample Type				Lab PW				Job #			
BWS2254-D2-AQ				11:00				G				Lopez, Maria				Job #			
BWS2254-D2-FB				11:00				G				Maria.Lopez@et.eurofinsus.com				Job #			
Sample Identification				Sample Date				Sample Type				Lab PW				Job #			
BWS2254-D2-AQ				11:00				G				Lopez, Maria				Job #			
BWS2254-D2-FB				11:00				G				Maria.Lopez@et.eurofinsus.com				Job #			
Sample Identification				Sample Date				Sample Type				Lab PW				Job #			
BWS2254-D2-AQ				11:00				G				Lopez, Maria				Job #			
BWS2254-D2-FB				11:00				G				Maria.Lopez@et.eurofinsus.com				Job #			
Sample Identification				Sample Date				Sample Type				Lab PW				Job #			
BWS2254-D2-AQ				11:00				G				Lopez, Maria				Job #			
BWS2254-D2-FB				11:00				G				Maria.Lopez@et.eurofinsus.com				Job #			
Sample Identification				Sample Date				Sample Type				Lab PW				Job #			
BWS2254-D2-AQ				11:00				G				Lopez, Maria				Job #			
BWS2254-D2-FB				11:00				G				Maria.Lopez@et.eurofinsus.com				Job #			
Sample Identification				Sample Date				Sample Type				Lab PW				Job #			
BWS2254-D2-AQ				11:00				G				Lopez, Maria				Job #			
BWS2254-D2-FB				11:00				G				Maria.Lopez@et.eurofinsus.com				Job #			
Sample Identification				Sample Date				Sample Type				Lab PW				Job #			
BWS2254-D2-AQ				11:00				G				Lopez, Maria				Job #			
BWS2254-D2-FB				11:00				G				Maria.Lopez@et.eurofinsus.com				Job #			
Sample Identification				Sample Date				Sample Type				Lab PW				Job #			
BWS2254-D2-AQ				11:00				G				Lopez, Maria				Job #			
BWS2254-D2-FB				11:00				G				Maria.Lopez@et.eurofinsus.com				Job #			
Sample Identification				Sample Date				Sample Type				Lab PW				Job #			
BWS2254-D2-AQ				11:00				G				Lopez, Maria				Job #			
BWS2254-D2-FB				11:00				G				Maria.Lopez@et.eurofinsus.com				Job #			
Sample Identification				Sample Date				Sample Type				Lab PW				Job #			
BWS2254-D2-AQ																			

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-224594-1
SDG Number: Site D2 PFAS 533/537.1

Login Number: 224594

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).	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	