

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

JOB NUMBER

380-137915-1

Eurofins Eaton Analytical Pomona

Job Notes

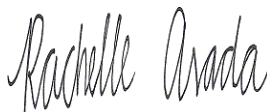
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The test results in this report relate only to the samples as received by the laboratory and meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Compliance Statement

1. Laboratory is accredited in accordance with TNI 2016 Standards and ISO/IEC 17025:2017.
2. Laboratory certifies that the test results meet all TNI 2016 and ISO/IEC 17025:2017 requirements unless noted under the individual analysis
3. Test results relate only to the sample(s) tested.
4. This report shall not be reproduced except in full, without the written approval of the laboratory.
5. Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.
(DW, Water matrices)

Authorization



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Authorized for release by
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Definitions/Glossary

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

Job ID: 380-137915-1

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: 380-137915-1

Job ID: 380-137915-1

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Job Narrative 380-137915-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 2/27/2025 10:03 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 2.7°C.

PFAS

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

Detection Summary

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

Job ID: 380-137915-1

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-137915-1

☐ No Detections.

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-137915-2

☐ 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: 380-137915-1

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-137915-1

Date Collected: 02/26/25 10:30

Matrix: Water

Date Received: 02/27/25 10:03

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 (11CI-PF3OUdS)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9CI-PF3ONS)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 19:44	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	134		50 - 200	03/03/25 06:56	03/04/25 19:44	1
13C6 PFDA	113		50 - 200	03/03/25 06:56	03/04/25 19:44	1
13C5 PFHxA	108		50 - 200	03/03/25 06:56	03/04/25 19:44	1
13C4 PFHpA	108		50 - 200	03/03/25 06:56	03/04/25 19:44	1
13C8 PFOA	114		50 - 200	03/03/25 06:56	03/04/25 19:44	1
13C9 PFNA	116		50 - 200	03/03/25 06:56	03/04/25 19:44	1
13C7 PFUnA	115		50 - 200	03/03/25 06:56	03/04/25 19:44	1
13C2 PFDoA	115		50 - 200	03/03/25 06:56	03/04/25 19:44	1
13C4 PFBA	118		50 - 200	03/03/25 06:56	03/04/25 19:44	1
13C5 PFPeA	128		50 - 200	03/03/25 06:56	03/04/25 19:44	1
13C3 PFBS	108		50 - 200	03/03/25 06:56	03/04/25 19:44	1
13C3 PFHxS	109		50 - 200	03/03/25 06:56	03/04/25 19:44	1
13C8 PFOS	111		50 - 200	03/03/25 06:56	03/04/25 19:44	1

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Client Sample Results

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

Job ID: 380-137915-1

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-137915-1

Date Collected: 02/26/25 10:30

Matrix: Water

Date Received: 02/27/25 10:03

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	125		50 - 200	03/03/25 06:56	03/04/25 19:44	1
13C2-6:2-FTS	111		50 - 200	03/03/25 06:56	03/04/25 19:44	1
13C2-8:2-FTS	112		50 - 200	03/03/25 06:56	03/04/25 19:44	1

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:35	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:35	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:35	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:35	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:35	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:35	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:35	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:35	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:35	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:35	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:35	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:35	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:35	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:35	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:35	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:35	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:35	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	99		70 - 130			03/01/25 06:23	03/01/25 23:35	1
13C2 PFHxA	113		70 - 130			03/01/25 06:23	03/01/25 23:35	1
13C2 PFDA	113		70 - 130			03/01/25 06:23	03/01/25 23:35	1
13C3-GenX	112		70 - 130			03/01/25 06:23	03/01/25 23:35	1

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-137915-2

Date Collected: 02/26/25 10:30

Matrix: Water

Date Received: 02/27/25 10:03

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1

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Client Sample Results

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

Job ID: 380-137915-1

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-137915-2

Date Collected: 02/26/25 10:30

Matrix: Water

Date Received: 02/27/25 10:03

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		03/03/25 06:56	03/04/25 20:13	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	132		50 - 200	03/03/25 06:56	03/04/25 20:13	1
13C6 PFDA	116		50 - 200	03/03/25 06:56	03/04/25 20:13	1
13C5 PFHxA	103		50 - 200	03/03/25 06:56	03/04/25 20:13	1
13C4 PFHpA	106		50 - 200	03/03/25 06:56	03/04/25 20:13	1
13C8 PFOA	115		50 - 200	03/03/25 06:56	03/04/25 20:13	1
13C9 PFNA	116		50 - 200	03/03/25 06:56	03/04/25 20:13	1
13C7 PFUnA	115		50 - 200	03/03/25 06:56	03/04/25 20:13	1
13C2 PFDoA	114		50 - 200	03/03/25 06:56	03/04/25 20:13	1
13C4 PFBA	117		50 - 200	03/03/25 06:56	03/04/25 20:13	1
13C5 PFPeA	130		50 - 200	03/03/25 06:56	03/04/25 20:13	1
13C3 PFBS	105		50 - 200	03/03/25 06:56	03/04/25 20:13	1
13C3 PFHxS	106		50 - 200	03/03/25 06:56	03/04/25 20:13	1
13C8 PFOS	110		50 - 200	03/03/25 06:56	03/04/25 20:13	1
13C2-4:2-FTS	114		50 - 200	03/03/25 06:56	03/04/25 20:13	1
13C2-6:2-FTS	106		50 - 200	03/03/25 06:56	03/04/25 20:13	1
13C2-8:2-FTS	112		50 - 200	03/03/25 06:56	03/04/25 20:13	1

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:46	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:46	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:46	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-137915-1

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-137915-2

Date Collected: 02/26/25 10:30

Matrix: Water

Date Received: 02/27/25 10:03

Method: EPA 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:46	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:46	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:46	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:46	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:46	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:46	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:46	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:46	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:46	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:46	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:46	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:46	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:46	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/01/25 06:23	03/01/25 23:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	102		70 - 130			03/01/25 06:23	03/01/25 23:46	1
13C2 PFHxA	109		70 - 130			03/01/25 06:23	03/01/25 23:46	1
13C2 PFDA	111		70 - 130			03/01/25 06:23	03/01/25 23:46	1
13C3-GenX	110		70 - 130			03/01/25 06:23	03/01/25 23:46	1

Action Limit Summary

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

Job ID: 380-137915-1

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-137915-1

Compliance Check

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

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

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-137915-2

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	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Surrogate Summary

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

Job ID: 380-137915-1

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-137905-B-1-A MS	Matrix Spike	97	106	112	105
380-137905-C-1-A MSD	Matrix Spike Duplicate	95	106	110	109
380-137915-1	BWS2253-J1-AQ	99	113	113	112
380-137915-2	BWS2253-J1-FB	102	109	111	110
LCS 380-138984/21-A	Lab Control Sample	98	107	108	107
MBL 380-138984/19-A	Method Blank	96	109	110	107
MRL 380-138984/20-A	Lab Control Sample	96	108	110	106

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: 380-137915-1

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)
380-137668-B-1-A MS	Matrix Spike	108	102	98	101	102	103	105	107
380-137668-C-1-A MSD	Matrix Spike Duplicate	124	111	109	108	111	108	109	110
380-137915-1	BWS2253-J1-AQ	134	113	108	108	114	116	115	115
380-137915-2	BWS2253-J1-FB	132	116	103	106	115	116	115	114
LCS 380-139262/14-A	Lab Control Sample	118	110	110	111	114	114	98	88
MBL 380-139262/12-A	Method Blank	104	113	105	106	115	112	105	100
MRL 380-139262/13-A	Lab Control Sample	97	113	104	105	110	113	112	113

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)
380-137668-B-1-A MS	Matrix Spike	107	115	107	110	108	117	104	110
380-137668-C-1-A MSD	Matrix Spike Duplicate	116	125	114	116	114	124	112	114
380-137915-1	BWS2253-J1-AQ	118	128	108	109	111	125	111	112
380-137915-2	BWS2253-J1-FB	117	130	105	106	110	114	106	112
LCS 380-139262/14-A	Lab Control Sample	111	119	109	110	110	112	102	108
MBL 380-139262/12-A	Method Blank	112	123	110	111	109	117	107	113
MRL 380-139262/13-A	Lab Control Sample	110	118	113	111	112	119	106	110

Surrogate Legend

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

QC Sample Results

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

Job ID: 380-137915-1

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

Lab Sample ID: MBL 380-139262/12-A

Matrix: Water

Analysis Batch: 139610

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 139262

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		03/03/25 06:56	03/04/25 16:28	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	104		50 - 200	03/03/25 06:56	03/04/25 16:28	1
13C6 PFDA	113		50 - 200	03/03/25 06:56	03/04/25 16:28	1
13C5 PFHxA	105		50 - 200	03/03/25 06:56	03/04/25 16:28	1
13C4 PFHpA	106		50 - 200	03/03/25 06:56	03/04/25 16:28	1
13C8 PFOA	115		50 - 200	03/03/25 06:56	03/04/25 16:28	1
13C9 PFNA	112		50 - 200	03/03/25 06:56	03/04/25 16:28	1
13C7 PFUnA	105		50 - 200	03/03/25 06:56	03/04/25 16:28	1
13C2 PFDoA	100		50 - 200	03/03/25 06:56	03/04/25 16:28	1
13C4 PFBA	112		50 - 200	03/03/25 06:56	03/04/25 16:28	1
13C5 PFPeA	123		50 - 200	03/03/25 06:56	03/04/25 16:28	1
13C3 PFBS	110		50 - 200	03/03/25 06:56	03/04/25 16:28	1
13C3 PFHxS	111		50 - 200	03/03/25 06:56	03/04/25 16:28	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-137915-1

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

Lab Sample ID: MBL 380-139262/12-A

Matrix: Water

Analysis Batch: 139610

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 139262

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	109		50 - 200	03/03/25 06:56	03/04/25 16:28	1
13C2-4:2-FTS	117		50 - 200	03/03/25 06:56	03/04/25 16:28	1
13C2-6:2-FTS	107		50 - 200	03/03/25 06:56	03/04/25 16:28	1
13C2-8:2-FTS	113		50 - 200	03/03/25 06:56	03/04/25 16:28	1

Lab Sample ID: LCS 380-139262/14-A

Matrix: Water

Analysis Batch: 139610

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 139262

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.2	45.5		ng/L		76	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	60.2	49.1		ng/L		81	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.2	53.2		ng/L		88	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.2	51.8		ng/L		86	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.2	53.1		ng/L		88	70 - 130
Perfluorodecanoic acid (PFDA)	60.2	54.6		ng/L		91	70 - 130
Perfluorododecanoic acid (PFDoA)	60.2	55.5		ng/L		92	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.2	52.4		ng/L		87	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.2	51.0		ng/L		85	70 - 130
Perfluorohexanoic acid (PFHxA)	60.2	51.7		ng/L		86	70 - 130
Perfluorononanoic acid (PFNA)	60.2	51.9		ng/L		86	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.2	51.7		ng/L		86	70 - 130
Perfluorooctanoic acid (PFOA)	60.2	52.4		ng/L		87	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.2	54.6		ng/L		91	70 - 130
Perfluorobutanoic acid (PFBA)	60.2	52.7		ng/L		88	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.2	53.7		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.2	54.9		ng/L		91	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.2	54.5		ng/L		90	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.2	50.6		ng/L		84	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.2	52.1		ng/L		86	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.2	54.5		ng/L		91	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.2	51.6		ng/L		86	70 - 130
Perfluoropentanoic acid (PFPeA)	60.2	53.0		ng/L		88	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.2	52.3		ng/L		87	70 - 130

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QC Sample Results

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

Job ID: 380-137915-1

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

Lab Sample ID: LCS 380-139262/14-A

Matrix: Water

Analysis Batch: 139610

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 139262

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	60.2	50.6		ng/L		84	70 - 130
	LCS	LCS					
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	118		50 - 200				
13C6 PFDA	110		50 - 200				
13C5 PFHxA	110		50 - 200				
13C4 PFHpA	111		50 - 200				
13C8 PFOA	114		50 - 200				
13C9 PFNA	114		50 - 200				
13C7 PFUnA	98		50 - 200				
13C2 PFDoA	88		50 - 200				
13C4 PFBA	111		50 - 200				
13C5 PFPeA	119		50 - 200				
13C3 PFBS	109		50 - 200				
13C3 PFHxS	110		50 - 200				
13C8 PFOS	110		50 - 200				
13C2-4:2-FTS	112		50 - 200				
13C2-6:2-FTS	102		50 - 200				
13C2-8:2-FTS	108		50 - 200				

Lab Sample ID: MRL 380-139262/13-A

Matrix: Water

Analysis Batch: 139610

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 139262

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	1.86	J	ng/L		92	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2.01	1.92	J	ng/L		96	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	2.02	J	ng/L		100	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	1.98	J	ng/L		98	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.00	J	ng/L		99	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.06	J	ng/L		102	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.21	J	ng/L		110	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.05	J	ng/L		102	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	1.96	J	ng/L		97	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	1.93	J	ng/L		96	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.00	J	ng/L		99	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.01	J	ng/L		100	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.07	J	ng/L		103	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.07	J	ng/L		103	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	2.11	J	ng/L		105	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-137915-1

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

Lab Sample ID: MRL 380-139262/13-A

Matrix: Water

Analysis Batch: 139610

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 139262

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.20	J	ng/L		109	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.07	J	ng/L		103	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.17	J	ng/L		108	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	2.12	J	ng/L		106	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.01	1.84	J	ng/L		91	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.07	J	ng/L		103	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	1.97	J	ng/L		98	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	2.15	J	ng/L		107	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	2.05	J	ng/L		102	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	1.95	J	ng/L		97	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	97		50 - 200
13C6 PFDA	113		50 - 200
13C5 PFHxA	104		50 - 200
13C4 PFHpA	105		50 - 200
13C8 PFOA	110		50 - 200
13C9 PFNA	113		50 - 200
13C7 PFUnA	112		50 - 200
13C2 PFDoA	113		50 - 200
13C4 PFBA	110		50 - 200
13C5 PFPeA	118		50 - 200
13C3 PFBS	113		50 - 200
13C3 PFHxS	111		50 - 200
13C8 PFOS	112		50 - 200
13C2-4:2-FTS	119		50 - 200
13C2-6:2-FTS	106		50 - 200
13C2-8:2-FTS	110		50 - 200

Lab Sample ID: 380-137668-B-1-A MS

Matrix: Water

Analysis Batch: 139610

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 139262

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.4	50.7		ng/L		84	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.4	52.3		ng/L		87	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	52.0		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: 380-137915-1

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

Lab Sample ID: 380-137668-B-1-A MS

Matrix: Water

Analysis Batch: 139610

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 139262

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		60.4	53.7		ng/L		89	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.4	55.6		ng/L		91	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		60.4	56.6		ng/L		94	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.4	56.3		ng/L		93	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	52.6		ng/L		86	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.4	55.6		ng/L		89	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		60.4	56.4		ng/L		93	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.4	54.2		ng/L		90	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.4	55.8		ng/L		90	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		60.4	56.5		ng/L		92	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	55.4		ng/L		92	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		60.4	53.8		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	55.6		ng/L		92	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	57.4		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	55.3		ng/L		92	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	52.6		ng/L		87	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.4	53.7		ng/L		89	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	54.2		ng/L		90	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	51.4		ng/L		85	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		60.4	54.6		ng/L		90	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	54.8		ng/L		91	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	52.5		ng/L		87	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C3 HFPO-DA	108		50 - 200
13C6 PFDA	102		50 - 200
13C5 PFHxA	98		50 - 200
13C4 PFHpA	101		50 - 200
13C8 PFOA	102		50 - 200
13C9 PFNA	103		50 - 200
13C7 PFUnA	105		50 - 200
13C2 PFDoA	107		50 - 200
13C4 PFBA	107		50 - 200
13C5 PFPeA	115		50 - 200
13C3 PFBS	107		50 - 200
13C3 PFHxS	110		50 - 200
13C8 PFOS	108		50 - 200

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QC Sample Results

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

Job ID: 380-137915-1

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

Lab Sample ID: 380-137668-B-1-A MS

Matrix: Water

Analysis Batch: 139610

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 139262

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2-4:2-FTS	117		50 - 200
13C2-6:2-FTS	104		50 - 200
13C2-8:2-FTS	110		50 - 200

Lab Sample ID: 380-137668-C-1-A MSD

Matrix: Water

Analysis Batch: 139610

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 139262

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.4	49.8		ng/L		82	70 - 130	2	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		60.4	51.3		ng/L		85	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	52.9		ng/L		88	70 - 130	2	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.4	53.0		ng/L		88	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.4	53.9		ng/L		88	70 - 130	3	30
Perfluorodecanoic acid (PFDA)	<2.0		60.4	54.3		ng/L		90	70 - 130	4	30
Perfluorododecanoic acid (PFDaA)	<2.0		60.4	56.0		ng/L		93	70 - 130	0	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	53.3		ng/L		88	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.4	53.8		ng/L		86	70 - 130	3	30
Perfluorohexanoic acid (PFHxA)	<2.0		60.4	53.1		ng/L		88	70 - 130	6	30
Perfluorononanoic acid (PFNA)	<2.0		60.4	55.9		ng/L		93	70 - 130	3	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.4	55.3		ng/L		90	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		60.4	54.8		ng/L		89	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	55.2		ng/L		91	70 - 130	0	30
Perfluorobutanoic acid (PFBA)	<2.0		60.4	53.4		ng/L		88	70 - 130	1	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	56.6		ng/L		94	70 - 130	2	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	55.1		ng/L		91	70 - 130	4	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	51.3		ng/L		85	70 - 130	7	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	51.6		ng/L		85	70 - 130	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<2.0		60.4	53.3		ng/L		88	70 - 130	1	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	53.1		ng/L		88	70 - 130	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	51.2		ng/L		85	70 - 130	0	30
Perfluoropentanoic acid (PFPeA)	<2.0		60.4	52.8		ng/L		88	70 - 130	3	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	53.6		ng/L		89	70 - 130	2	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	52.6		ng/L		87	70 - 130	0	30

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QC Sample Results

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

Job ID: 380-137915-1

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

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C3 HFPO-DA	124		50 - 200
13C6 PFDA	111		50 - 200
13C5 PFHxA	109		50 - 200
13C4 PFHpA	108		50 - 200
13C8 PFOA	111		50 - 200
13C9 PFNA	108		50 - 200
13C7 PFUnA	109		50 - 200
13C2 PFDoA	110		50 - 200
13C4 PFBA	116		50 - 200
13C5 PFPeA	125		50 - 200
13C3 PFBS	114		50 - 200
13C3 PFHxS	116		50 - 200
13C8 PFOS	114		50 - 200
13C2-4:2-FTS	124		50 - 200
13C2-6:2-FTS	112		50 - 200
13C2-8:2-FTS	114		50 - 200

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS)

Lab Sample ID: MBL 380-138984/19-A
Matrix: Water
Analysis Batch: 139018

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 138984

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		03/01/25 06:23	03/01/25 21:16	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		03/01/25 06:23	03/01/25 21:16	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		03/01/25 06:23	03/01/25 21:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		03/01/25 06:23	03/01/25 21:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		03/01/25 06:23	03/01/25 21:16	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		03/01/25 06:23	03/01/25 21:16	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		03/01/25 06:23	03/01/25 21:16	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		03/01/25 06:23	03/01/25 21:16	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		03/01/25 06:23	03/01/25 21:16	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		03/01/25 06:23	03/01/25 21:16	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		03/01/25 06:23	03/01/25 21:16	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		03/01/25 06:23	03/01/25 21:16	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		03/01/25 06:23	03/01/25 21:16	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		03/01/25 06:23	03/01/25 21:16	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		03/01/25 06:23	03/01/25 21:16	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		03/01/25 06:23	03/01/25 21:16	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		03/01/25 06:23	03/01/25 21:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		03/01/25 06:23	03/01/25 21:16	1
Surrogate	MBL %Recovery	MBL Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	96		70 - 130			03/01/25 06:23	03/01/25 21:16	1
13C2 PFHxA	109		70 - 130			03/01/25 06:23	03/01/25 21:16	1
13C2 PFDA	110		70 - 130			03/01/25 06:23	03/01/25 21:16	1

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QC Sample Results

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

Job ID: 380-137915-1

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: MBL 380-138984/19-A

Matrix: Water

Analysis Batch: 139018

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 138984

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-GenX	107		70 - 130	03/01/25 06:23	03/01/25 21:16	1

Lab Sample ID: LCS 380-138984/21-A

Matrix: Water

Analysis Batch: 139018

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 138984

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	25.2	27.4		ng/L		109	70 - 130
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	25.2	26.1		ng/L		104	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.2	27.0		ng/L		107	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.2	26.4		ng/L		105	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.2	24.8		ng/L		98	70 - 130
Perfluorohexanoic acid (PFHxA)	25.2	26.8		ng/L		106	70 - 130
Perfluorododecanoic acid (PFDoA)	25.2	26.2		ng/L		104	70 - 130
Perfluorooctanoic acid (PFOA)	25.2	27.5		ng/L		109	70 - 130
Perfluorodecanoic acid (PFDA)	25.2	26.5		ng/L		105	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.2	26.5		ng/L		105	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.2	26.8		ng/L		107	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.2	27.7		ng/L		110	70 - 130
Perfluorononanoic acid (PFNA)	25.2	27.1		ng/L		108	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.2	26.5		ng/L		105	70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.2	25.9		ng/L		103	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.2	27.3		ng/L		108	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.2	27.5		ng/L		109	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.2	27.8		ng/L		110	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	98		70 - 130
13C2 PFHxA	107		70 - 130
13C2 PFDA	108		70 - 130
13C3-GenX	107		70 - 130

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QC Sample Results

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

Job ID: 380-137915-1

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: MRL 380-138984/20-A

Matrix: Water

Analysis Batch: 139018

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 138984

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.20	J	ng/L		109	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.15	J	ng/L		107	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.25	J	ng/L		112	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.01	2.00	J	ng/L		100	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.01	1.97	J	ng/L		98	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.21	J	ng/L		110	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.18	J	ng/L		109	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.36	J	ng/L		117	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.22	J	ng/L		110	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.19	J	ng/L		109	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.10	J	ng/L		104	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.19	J	ng/L		109	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.17	J	ng/L		108	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.01	2.20	J	ng/L		110	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.01	2.08	J	ng/L		104	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	2.19	J	ng/L		109	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.21	J	ng/L		110	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	2.23	J	ng/L		111	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	96		70 - 130
13C2 PFHxA	108		70 - 130
13C2 PFDA	110		70 - 130
13C3-GenX	106		70 - 130

Lab Sample ID: 380-137905-B-1-A MS

Matrix: Water

Analysis Batch: 139018

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 138984

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		25.2	27.8		ng/L		110	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.2	29.3		ng/L		111	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.2	28.3		ng/L		112	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.2	26.0		ng/L		103	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-137915-1

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: 380-137905-B-1-A MS

Matrix: Water

Analysis Batch: 139018

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 138984

Perfluorinated Acid Data - 10000									
Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier			Limits	Limits
N-ethylperfluorooctanesulfonami doacetic acid (NEtFOSAA)	<2.0		25.2	24.0		ng/L		95	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		25.2	25.1		ng/L		100	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		25.2	27.4		ng/L		109	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		25.2	27.3		ng/L		108	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		25.2	28.1		ng/L		111	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	2.0		25.2	30.8		ng/L		114	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.2	28.5		ng/L		106	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		25.2	28.1		ng/L		112	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		25.2	27.6		ng/L		109	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		25.2	27.8		ng/L		110	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.2	26.7		ng/L		106	70 - 130
9-Chlorohexadecafluoro-3-oxan onane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.2	28.8		ng/L		114	70 - 130
11-Chloroeicosafluoro-3-oxaund ecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.2	29.3		ng/L		116	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.2	26.2		ng/L		104	70 - 130
						</			

Lab Sample ID: 380-137905-C-1-A MSD

Matrix: Water

Analysis Batch: 139018

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 138984

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.2	28.4		ng/L		113	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		25.2	27.2		ng/L		103	70 - 130	7	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.2	27.7		ng/L		110	70 - 130	2	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.2	25.9		ng/L		103	70 - 130	0	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.2	24.4		ng/L		97	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.2	26.3		ng/L		105	70 - 130	5	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.2	27.5		ng/L		109	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		25.2	27.0		ng/L		108	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		25.2	27.8		ng/L		111	70 - 130	1	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-137915-1

Method: 537.1 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: 380-137905-C-1-A MSD

Matrix: Water

Analysis Batch: 139018

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 138984

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	2.0		25.2	29.8		ng/L		111	70 - 130	3	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		25.2	27.9		ng/L		104	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.2	27.6		ng/L		110	70 - 130	2	30
Perfluorononanoic acid (PFNA)	<2.0		25.2	27.3		ng/L		109	70 - 130	1	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.2	28.0		ng/L		111	70 - 130	0	30
Perfluorotridecanoic acid (PFTTrDA)	<2.0		25.2	26.8		ng/L		107	70 - 130	0	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		25.2	27.8		ng/L		110	70 - 130	3	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		25.2	28.9		ng/L		115	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		25.2	27.4		ng/L		109	70 - 130	4	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
d5-NEtFOSAA	95		70 - 130								
13C2 PFHxA	106		70 - 130								
13C2 PFDA	110		70 - 130								
13C3-GenX	109		70 - 130								

QC Association Summary

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

Job ID: 380-137915-1

LCMS

Prep Batch: 138984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-137915-1	BWS2253-J1-AQ	Total/NA	Water	537.1 DW	
380-137915-2	BWS2253-J1-FB	Total/NA	Water	537.1 DW	
MBL 380-138984/19-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-138984/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-138984/20-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-137905-B-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-137905-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 139018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-137915-1	BWS2253-J1-AQ	Total/NA	Water	537.1	138984
380-137915-2	BWS2253-J1-FB	Total/NA	Water	537.1	138984
MBL 380-138984/19-A	Method Blank	Total/NA	Water	537.1	138984
LCS 380-138984/21-A	Lab Control Sample	Total/NA	Water	537.1	138984
MRL 380-138984/20-A	Lab Control Sample	Total/NA	Water	537.1	138984
380-137905-B-1-A MS	Matrix Spike	Total/NA	Water	537.1	138984
380-137905-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	138984

Prep Batch: 139262

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-137915-1	BWS2253-J1-AQ	Total/NA	Water	533	
380-137915-2	BWS2253-J1-FB	Total/NA	Water	533	
MBL 380-139262/12-A	Method Blank	Total/NA	Water	533	
LCS 380-139262/14-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-139262/13-A	Lab Control Sample	Total/NA	Water	533	
380-137668-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-137668-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 139610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-137915-1	BWS2253-J1-AQ	Total/NA	Water	533	139262
380-137915-2	BWS2253-J1-FB	Total/NA	Water	533	139262
MBL 380-139262/12-A	Method Blank	Total/NA	Water	533	139262
LCS 380-139262/14-A	Lab Control Sample	Total/NA	Water	533	139262
MRL 380-139262/13-A	Lab Control Sample	Total/NA	Water	533	139262
380-137668-B-1-A MS	Matrix Spike	Total/NA	Water	533	139262
380-137668-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	139262

Lab Chronicle

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

Job ID: 380-137915-1

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-137915-1

Date Collected: 02/26/25 10:30

Matrix: Water

Date Received: 02/27/25 10:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			139262	XTD8	EA POM	03/03/25 06:56
Total/NA	Analysis	533		1	139610	M7ML	EA POM	03/04/25 19:44
Total/NA	Prep	537.1 DW			138984	G9MN	EA POM	03/01/25 06:23
Total/NA	Analysis	537.1		1	139018	M7ML	EA POM	03/01/25 23:35

Client Sample ID: BWS2253-J1-FB

Lab Sample ID: 380-137915-2

Date Collected: 02/26/25 10:30

Matrix: Water

Date Received: 02/27/25 10:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			139262	XTD8	EA POM	03/03/25 06:56
Total/NA	Analysis	533		1	139610	M7ML	EA POM	03/04/25 20:13
Total/NA	Prep	537.1 DW			138984	G9MN	EA POM	03/01/25 06:23
Total/NA	Analysis	537.1		1	139018	M7ML	EA POM	03/01/25 23:46

Laboratory References:

EA POM = Eurofins Eaton Analytical 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: 380-137915-1

Laboratory: Eurofins Eaton Analytical Pomona

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	01-31-25 *

- 1
- 2
- 3
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- 16
- 17

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

Method Summary

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

Job ID: 380-137915-1

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA POM
537.1	Perfluorinated Alkyl Acids (LC/MS)	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 Eaton Analytical 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: 380-137915-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-137915-1	BWS2253-J1-AQ	Water	02/26/25 10:30	02/27/25 10:03
380-137915-2	BWS2253-J1-FB	Water	02/26/25 10:30	02/27/25 10:03

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REAL FROBIV

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-137915-1

Login Number: 137915

List Source: Eurofins Eaton Analytical Pomona

List Number: 1

Creator: Edrosa, Rey

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	