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ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

RED-HILL
PFAS: Halawa Wells P1

JOB NUMBER

380-207142-1

Eurofins Pomona

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Compliance Statement

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

Authorization



Authorized for release by
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Definitions/Glossary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

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: RED-HILL

Job ID: 380-207142-1

Job ID: 380-207142-1

Eurofins Pomona

Job Narrative 380-207142-1

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 4/8/2026 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.1°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: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

Client Sample ID: HALAWA WELLS P1 (331-023-WL065)
PWSID Number: HI0000331

Lab Sample ID: 380-207142-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	2.8		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	2.7		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.5		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	2.0		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	3.3		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.6		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanoic acid (PFHxA)	2.7		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.7		2.0	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065)
PWSID Number: HI0000331

Lab Sample ID: 380-207142-2

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: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

Client Sample ID: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-207142-1

Date Collected: 04/06/26 10:31

Matrix: Drinking Water

Date Received: 04/08/26 10:00

PWSID Number: HI0000331

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		04/10/26 17:14	04/11/26 17:54	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
Perfluorohexanesulfonic acid (PFHxS)	2.8		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
Perfluorohexanoic acid (PFHxA)	2.7		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
Perfluorooctanesulfonic acid (PFOS)	2.5		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
Perfluorooctanoic acid (PFOA)	2.0		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
Perfluoropentanoic acid (PFPeA)	3.3		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 17:54	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	105		50 - 200	04/10/26 17:14	04/11/26 17:54	1
13C6 PFDA	107		50 - 200	04/10/26 17:14	04/11/26 17:54	1
13C5 PFHxA	104		50 - 200	04/10/26 17:14	04/11/26 17:54	1
13C4 PFHpA	105		50 - 200	04/10/26 17:14	04/11/26 17:54	1
13C8 PFOA	106		50 - 200	04/10/26 17:14	04/11/26 17:54	1
13C9 PFNA	107		50 - 200	04/10/26 17:14	04/11/26 17:54	1
13C7 PFUnA	106		50 - 200	04/10/26 17:14	04/11/26 17:54	1
13C2 PFDoA	106		50 - 200	04/10/26 17:14	04/11/26 17:54	1
13C4 PFBA	112		50 - 200	04/10/26 17:14	04/11/26 17:54	1
13C5 PFPeA	114		50 - 200	04/10/26 17:14	04/11/26 17:54	1
13C3 PFBS	109		50 - 200	04/10/26 17:14	04/11/26 17:54	1
13C3 PFHxS	109		50 - 200	04/10/26 17:14	04/11/26 17:54	1

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Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

Client Sample ID: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-207142-1

Date Collected: 04/06/26 10:31

Matrix: Drinking Water

Date Received: 04/08/26 10:00

PWSID Number: HI0000331

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	111		50 - 200	04/10/26 17:14	04/11/26 17:54	1
13C2-4:2-FTS	115		50 - 200	04/10/26 17:14	04/11/26 17:54	1
13C2-6:2-FTS	114		50 - 200	04/10/26 17:14	04/11/26 17:54	1
13C2-8:2-FTS	117		50 - 200	04/10/26 17:14	04/11/26 17:54	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		04/10/26 01:46	04/10/26 17:05	1
Perfluorooctanesulfonic acid (PFOS)	2.6		2.0	ng/L		04/10/26 01:46	04/10/26 17:05	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 17:05	1
N-methylperfluorooctanesulfonamide cetic acid (NMeFOSAA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 17:05	1
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 17:05	1
Perfluorohexanoic acid (PFHxA)	2.7		2.0	ng/L		04/10/26 01:46	04/10/26 17:05	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 17:05	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 17:05	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 17:05	1
Perfluorohexanesulfonic acid (PFHxS)	2.7		2.0	ng/L		04/10/26 01:46	04/10/26 17:05	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 17:05	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 17:05	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 17:05	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 17:05	1
Perfluorotridecanoic acid (PFTTrDA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 17:05	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 17:05	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 17:05	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 17:05	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	99		70 - 130			04/10/26 01:46	04/10/26 17:05	1
13C2 PFHxA	99		70 - 130			04/10/26 01:46	04/10/26 17:05	1
13C2 PFDA	106		70 - 130			04/10/26 01:46	04/10/26 17:05	1
13C3-GenX	100		70 - 130			04/10/26 01:46	04/10/26 17:05	1

Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-207142-2

Date Collected: 04/06/26 10:31

Matrix: Water

Date Received: 04/08/26 10:00

PWSID Number: HI0000331

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		04/10/26 17:14	04/11/26 18:03	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1

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Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-207142-2

Date Collected: 04/06/26 10:31

Matrix: Water

Date Received: 04/08/26 10:00

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		04/10/26 17:14	04/11/26 18:03	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	103		50 - 200	04/10/26 17:14	04/11/26 18:03	1
13C6 PFDA	107		50 - 200	04/10/26 17:14	04/11/26 18:03	1
13C5 PFHxA	104		50 - 200	04/10/26 17:14	04/11/26 18:03	1
13C4 PFHpA	106		50 - 200	04/10/26 17:14	04/11/26 18:03	1
13C8 PFOA	107		50 - 200	04/10/26 17:14	04/11/26 18:03	1
13C9 PFNA	110		50 - 200	04/10/26 17:14	04/11/26 18:03	1
13C7 PFUnA	108		50 - 200	04/10/26 17:14	04/11/26 18:03	1
13C2 PFDoA	107		50 - 200	04/10/26 17:14	04/11/26 18:03	1
13C4 PFBA	111		50 - 200	04/10/26 17:14	04/11/26 18:03	1
13C5 PFPeA	107		50 - 200	04/10/26 17:14	04/11/26 18:03	1
13C3 PFBS	107		50 - 200	04/10/26 17:14	04/11/26 18:03	1
13C3 PFHxS	108		50 - 200	04/10/26 17:14	04/11/26 18:03	1
13C8 PFOS	108		50 - 200	04/10/26 17:14	04/11/26 18:03	1
13C2-4:2-FTS	112		50 - 200	04/10/26 17:14	04/11/26 18:03	1
13C2-6:2-FTS	110		50 - 200	04/10/26 17:14	04/11/26 18:03	1
13C2-8:2-FTS	115		50 - 200	04/10/26 17:14	04/11/26 18:03	1

Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-207142-2

Date Collected: 04/06/26 10:31

Matrix: Water

Date Received: 04/08/26 10:00

PWSID Number: HI0000331

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		04/10/26 01:46	04/10/26 20:07	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 20:07	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 20:07	1
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 20:07	1
N-ethylperfluorooctanesulfonamideacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 20:07	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 20:07	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 20:07	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 20:07	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 20:07	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 20:07	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 20:07	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 20:07	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 20:07	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 20:07	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 20:07	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 20:07	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 20:07	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/10/26 01:46	04/10/26 20:07	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	105		70 - 130			04/10/26 01:46	04/10/26 20:07	1
13C2 PFHxA	103		70 - 130			04/10/26 01:46	04/10/26 20:07	1
13C2 PFDA	111		70 - 130			04/10/26 01:46	04/10/26 20:07	1
13C3-GenX	94		70 - 130			04/10/26 01:46	04/10/26 20:07	1

Action Limit Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

Client Sample ID: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-207142-1

PWSID Number: HI0000331

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)	2.8		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.5		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)	2.6		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)	2.7		ng/L	10	2.0	EPA 537.1 V2	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA

Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-207142-2

PWSID Number: HI0000331

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: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

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

Matrix: Drinking 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)
380-207142-1	HALAWA WELLS P1 (331-023-WL0	99	99	106	100
380-207142-1 MS	HALAWA WELLS P1 (331-023-WL065)	100	90	105	94
380-207142-1 MSD	HALAWA WELLS P1 (331-023-WL065)	90	90	102	91

Surrogate Legend

d5NEFOS = d5-NEtFOSAA
PFHxA = 13C2 PFHxA
PFDA = 13C2 PFDA
GenX = 13C3-GenX

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)
380-207142-2	FB: HALAWA WELLS P1 (331-023-	105	103	111	94
LCS 380-219039/21-A	Lab Control Sample	79	88	90	83
MBL 380-219039/19-A	Method Blank	106	108	119	99
MRL 380-219039/20-A	Lab Control Sample	100	101	112	100

Surrogate Legend

d5NEFOS = d5-NEtFOSAA
PFHxA = 13C2 PFHxA
PFDA = 13C2 PFDA
GenX = 13C3-GenX

Isotope Dilution Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDoA (50-200)
380-207142-1	HALAWA WELLS P1 (331-023-WL0)	105	107	104	105	106	107	106	106

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-207142-1	HALAWA WELLS P1 (331-023-WL0)	112	114	109	109	111	115	114	117

Surrogate Legend

- HFPODA = 13C3 HFPO-DA
- C6PFDA = 13C6 PFDA
- 13C5PHA = 13C5 PFHxA
- C4PFHA = 13C4 PFHpA
- C8PFOA = 13C8 PFOA
- C9PFNA = 13C9 PFNA
- 13C7PUA = 13C7 PFUnA
- PFDoA = 13C2 PFDoA
- 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

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDoA (50-200)
380-206165-E-1-A MS	Matrix Spike	105	104	106	104	106	111	106	106
380-206165-F-1-A MSD	Matrix Spike Duplicate	107	110	111	103	113	112	105	109
380-207142-2	FB: HALAWA WELLS P1 (331-023-WL065)	103	107	104	106	107	110	108	107
LCS 380-219210/22-A	Lab Control Sample	107	108	109	105	107	109	107	110
MBL 380-219210/20-A	Method Blank	98	103	107	107	107	108	104	104
MRL 380-219210/21-A	Lab Control Sample	106	109	108	107	112	111	108	110

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-206165-E-1-A MS	Matrix Spike	113	111	104	107	108	105	106	109
380-206165-F-1-A MSD	Matrix Spike Duplicate	110	112	106	114	114	114	110	113
380-207142-2	FB: HALAWA WELLS P1 (331-023-WL065)	111	107	107	108	108	112	110	115
LCS 380-219210/22-A	Lab Control Sample	109	106	106	106	109	106	104	108
MBL 380-219210/20-A	Method Blank	106	104	106	103	104	109	107	111
MRL 380-219210/21-A	Lab Control Sample	107	108	106	107	105	109	112	112

Surrogate Legend

- HFPODA = 13C3 HFPO-DA
- C6PFDA = 13C6 PFDA

Isotope Dilution Summary

Client: City & County of Honolulu

Project/Site: RED-HILL

13C5PHA = 13C5 PFHxA

C4PFHA = 13C4 PFHpA

C8PFOA = 13C8 PFOA

C9PFNA = 13C9 PFNA

13C7PUA = 13C7 PFUnA

PFD_oA = 13C2 PFD_oA

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

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

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QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

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

Lab Sample ID: MBL 380-219210/20-A
Matrix: Water
Analysis Batch: 219378

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 219210

Analyte	MBL	MBL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		04/10/26 17:14	04/11/26 14:54	1

Isotope Dilution	MBL	MBL	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C3 HFPO-DA	98		50 - 200	04/10/26 17:14	04/11/26 14:54	1
13C6 PFDA	103		50 - 200	04/10/26 17:14	04/11/26 14:54	1
13C5 PFHxA	107		50 - 200	04/10/26 17:14	04/11/26 14:54	1
13C4 PFHpA	107		50 - 200	04/10/26 17:14	04/11/26 14:54	1
13C8 PFOA	107		50 - 200	04/10/26 17:14	04/11/26 14:54	1
13C9 PFNA	108		50 - 200	04/10/26 17:14	04/11/26 14:54	1
13C7 PFUnA	104		50 - 200	04/10/26 17:14	04/11/26 14:54	1
13C2 PFDoA	104		50 - 200	04/10/26 17:14	04/11/26 14:54	1
13C4 PFBA	106		50 - 200	04/10/26 17:14	04/11/26 14:54	1
13C5 PFPeA	104		50 - 200	04/10/26 17:14	04/11/26 14:54	1
13C3 PFBS	106		50 - 200	04/10/26 17:14	04/11/26 14:54	1
13C3 PFHxS	103		50 - 200	04/10/26 17:14	04/11/26 14:54	1

Eurofins Pomona

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

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

Lab Sample ID: MBL 380-219210/20-A
Matrix: Water
Analysis Batch: 219378

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 219210

Isotope Dilution	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C8 PFOS	104		50 - 200	04/10/26 17:14	04/11/26 14:54	1
13C2-4:2-FTS	109		50 - 200	04/10/26 17:14	04/11/26 14:54	1
13C2-6:2-FTS	107		50 - 200	04/10/26 17:14	04/11/26 14:54	1
13C2-8:2-FTS	111		50 - 200	04/10/26 17:14	04/11/26 14:54	1

Lab Sample ID: LCS 380-219210/22-A
Matrix: Water
Analysis Batch: 219378

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 219210

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	120		ng/L		100	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	125		ng/L		104	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	122		ng/L		102	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	127		ng/L		105	70 - 130
Perfluorodecanoic acid (PFDA)	120	122		ng/L		101	70 - 130
Perfluorododecanoic acid (PFDoA)	120	123		ng/L		102	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	122		ng/L		102	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	121		ng/L		101	70 - 130
Perfluorohexanoic acid (PFHxA)	120	124		ng/L		103	70 - 130
Perfluorononanoic acid (PFNA)	120	123		ng/L		102	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	120		ng/L		100	70 - 130
Perfluorooctanoic acid (PFOA)	120	119		ng/L		99	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	127		ng/L		106	70 - 130
Perfluorobutanoic acid (PFBA)	120	120		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	124		ng/L		103	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	124		ng/L		103	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	124		ng/L		103	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	115		ng/L		96	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	120	123		ng/L		103	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	112		ng/L		93	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	120		ng/L		99	70 - 130
Perfluoropentanoic acid (PFPeA)	120	122		ng/L		102	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	121		ng/L		101	70 - 130

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

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

Lab Sample ID: LCS 380-219210/22-A
Matrix: Water
Analysis Batch: 219378

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 219210

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Perfluoropentanesulfonic acid (PFPeS)	120	125		ng/L		104	70 - 130
LCS LCS							
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	107		50 - 200				
13C6 PFDA	108		50 - 200				
13C5 PFHxA	109		50 - 200				
13C4 PFHpA	105		50 - 200				
13C8 PFOA	107		50 - 200				
13C9 PFNA	109		50 - 200				
13C7 PFUnA	107		50 - 200				
13C2 PFDoA	110		50 - 200				
13C4 PFBA	109		50 - 200				
13C5 PFPeA	106		50 - 200				
13C3 PFBS	106		50 - 200				
13C3 PFHxS	106		50 - 200				
13C8 PFOS	109		50 - 200				
13C2-4:2-FTS	106		50 - 200				
13C2-6:2-FTS	104		50 - 200				
13C2-8:2-FTS	108		50 - 200				

Lab Sample ID: MRL 380-219210/21-A
Matrix: Water
Analysis Batch: 219378

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 219210

Analyte	Spike Added	MRL	MRL	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.39	J	ng/L		119	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.38	J	ng/L		119	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.34	J	ng/L		117	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.23	J	ng/L		111	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.24	J	ng/L		112	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.34	J	ng/L		117	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.46	J	ng/L		123	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.38	J	ng/L		119	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.28	J	ng/L		114	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.38	J	ng/L		119	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.31	J	ng/L		115	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.32	J	ng/L		116	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.38	J	ng/L		119	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.32	J	ng/L		116	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.48	J	ng/L		124	50 - 150

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QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

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

Lab Sample ID: MRL 380-219210/21-A
Matrix: Water
Analysis Batch: 219378

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 219210

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.39	J	ng/L		119	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.51	J	ng/L		125	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.49	J	ng/L		124	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	2.42	J	ng/L		121	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.00	2.30	J	ng/L		115	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.20	J	ng/L		110	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	2.32	J	ng/L		116	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.34	J	ng/L		117	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	2.29	J	ng/L		114	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	2.33	J	ng/L		116	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	106		50 - 200
13C6 PFDA	109		50 - 200
13C5 PFHxA	108		50 - 200
13C4 PFHpA	107		50 - 200
13C8 PFOA	112		50 - 200
13C9 PFNA	111		50 - 200
13C7 PFUnA	108		50 - 200
13C2 PFDoA	110		50 - 200
13C4 PFBA	107		50 - 200
13C5 PFPeA	108		50 - 200
13C3 PFBS	106		50 - 200
13C3 PFHxS	107		50 - 200
13C8 PFOS	105		50 - 200
13C2-4:2-FTS	109		50 - 200
13C2-6:2-FTS	112		50 - 200
13C2-8:2-FTS	112		50 - 200

Lab Sample ID: 380-206165-E-1-A MS
Matrix: Water
Analysis Batch: 219378

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 219210

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	57.6		ng/L		95	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.4	61.6		ng/L		102	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	62.7		ng/L		104	70 - 130

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

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

Lab Sample ID: 380-206165-E-1-A MS

Client Sample ID: Matrix Spike

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 219378

Prep Batch: 219210

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Hexafluoropropylene Oxide	<2.0		60.4	61.4		ng/L		102	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.4	66.6		ng/L		110	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		60.4	61.4		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.4	65.4		ng/L		108	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	65.7		ng/L		109	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.4	62.9		ng/L		104	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		60.4	63.8		ng/L		106	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.4	61.6		ng/L		102	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.4	60.5		ng/L		100	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		60.4	65.5		ng/L		109	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	64.8		ng/L		107	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		60.4	62.3		ng/L		103	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	61.7		ng/L		102	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	66.8		ng/L		111	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	63.0		ng/L		104	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	59.2		ng/L		98	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.4	64.5		ng/L		107	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	58.1		ng/L		96	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	62.1		ng/L		103	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		60.4	61.6		ng/L		102	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	63.4		ng/L		105	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	62.3		ng/L		103	70 - 130

Isotope Dilution	MS MS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	105		50 - 200
13C6 PFDA	104		50 - 200
13C5 PFHxA	106		50 - 200
13C4 PFHpA	104		50 - 200
13C8 PFOA	106		50 - 200
13C9 PFNA	111		50 - 200
13C7 PFUnA	106		50 - 200
13C2 PFDoA	106		50 - 200
13C4 PFBA	113		50 - 200
13C5 PFPeA	111		50 - 200
13C3 PFBS	104		50 - 200
13C3 PFHxS	107		50 - 200
13C8 PFOS	108		50 - 200

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

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

Lab Sample ID: 380-206165-E-1-A MS

Matrix: Water

Analysis Batch: 219378

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 219210

<i>Isotope Dilution</i>	<i>MS MS</i>	<i>Qualifier</i>	<i>Limits</i>
	%Recovery		
13C2-4:2-FTS	105		50 - 200
13C2-6:2-FTS	106		50 - 200
13C2-8:2-FTS	109		50 - 200

Lab Sample ID: 380-206165-F-1-A MSD

Matrix: Water

Analysis Batch: 219378

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 219210

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.4	59.9		ng/L		99	70 - 130	4	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.4	61.0		ng/L		101	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	65.3		ng/L		108	70 - 130	4	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.4	61.7		ng/L		102	70 - 130	0	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.4	63.1		ng/L		105	70 - 130	5	30
Perfluorodecanoic acid (PFDA)	<2.0		60.4	62.4		ng/L		103	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.4	64.0		ng/L		106	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	64.5		ng/L		107	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.4	60.3		ng/L		100	70 - 130	4	30
Perfluorohexanoic acid (PFHxA)	<2.0		60.4	59.2		ng/L		98	70 - 130	7	30
Perfluorononanoic acid (PFNA)	<2.0		60.4	62.0		ng/L		103	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.4	60.3		ng/L		100	70 - 130	0	30
Perfluorooctanoic acid (PFOA)	<2.0		60.4	60.6		ng/L		100	70 - 130	8	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	64.8		ng/L		107	70 - 130	0	30
Perfluorobutanoic acid (PFBA)	<2.0		60.4	62.5		ng/L		104	70 - 130	0	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	65.8		ng/L		109	70 - 130	6	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	61.6		ng/L		102	70 - 130	8	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	65.7		ng/L		109	70 - 130	4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	59.7		ng/L		99	70 - 130	1	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.4	64.3		ng/L		107	70 - 130	0	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	59.7		ng/L		99	70 - 130	3	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	62.3		ng/L		103	70 - 130	0	30
Perfluoropentanoic acid (PFPeA)	<2.0		60.4	63.8		ng/L		106	70 - 130	4	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	60.9		ng/L		101	70 - 130	4	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	59.9		ng/L		99	70 - 130	4	30

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QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

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

Isotope Dilution	MSD MSD		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	107		50 - 200
13C6 PFDA	110		50 - 200
13C5 PFHxA	111		50 - 200
13C4 PFHpA	103		50 - 200
13C8 PFOA	113		50 - 200
13C9 PFNA	112		50 - 200
13C7 PFUnA	105		50 - 200
13C2 PFDoA	109		50 - 200
13C4 PFBA	110		50 - 200
13C5 PFPeA	112		50 - 200
13C3 PFBS	106		50 - 200
13C3 PFHxS	114		50 - 200
13C8 PFOS	114		50 - 200
13C2-4:2-FTS	114		50 - 200
13C2-6:2-FTS	110		50 - 200
13C2-8:2-FTS	113		50 - 200

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

Lab Sample ID: MBL 380-219039/19-A
Matrix: Water
Analysis Batch: 219214

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 219039

Analyte	MBL MBL		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		04/10/26 01:46	04/10/26 16:35	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		04/10/26 01:46	04/10/26 16:35	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		04/10/26 01:46	04/10/26 16:35	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		04/10/26 01:46	04/10/26 16:35	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		04/10/26 01:46	04/10/26 16:35	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		04/10/26 01:46	04/10/26 16:35	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		04/10/26 01:46	04/10/26 16:35	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		04/10/26 01:46	04/10/26 16:35	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		04/10/26 01:46	04/10/26 16:35	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		04/10/26 01:46	04/10/26 16:35	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		04/10/26 01:46	04/10/26 16:35	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		04/10/26 01:46	04/10/26 16:35	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		04/10/26 01:46	04/10/26 16:35	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		04/10/26 01:46	04/10/26 16:35	1
Perfluorotridecanoic acid (PFTTrDA)	<0.36		2.0	ng/L		04/10/26 01:46	04/10/26 16:35	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		04/10/26 01:46	04/10/26 16:35	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		04/10/26 01:46	04/10/26 16:35	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		04/10/26 01:46	04/10/26 16:35	1

Surrogate	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
d5-NEtFOSAA	106		70 - 130	04/10/26 01:46	04/10/26 16:35	1
13C2 PFHxA	108		70 - 130	04/10/26 01:46	04/10/26 16:35	1
13C2 PFDA	119		70 - 130	04/10/26 01:46	04/10/26 16:35	1

Eurofins Pomona

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

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

Lab Sample ID: MBL 380-219039/19-A
Matrix: Water
Analysis Batch: 219214

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 219039

<i>Surrogate</i>	<i>MBL</i>	<i>MBL</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3-GenX	99	Qualifier	70 - 130	04/10/26 01:46	04/10/26 16:35	1

Lab Sample ID: LCS 380-219039/21-A
Matrix: Water
Analysis Batch: 219214

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 219039

<i>Analyte</i>	<i>Spike</i>	<i>LCS</i>	<i>LCS</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec</i>
<i>Analyte</i>	<i>Added</i>	<i>Result</i>	<i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>Limits</i>
Hexafluoropropylene Oxide	25.0	21.9		ng/L		88	70 - 130
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	25.0	24.4		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.0	22.8		ng/L		91	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.0	20.5		ng/L		82	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.0	22.1		ng/L		88	70 - 130
Perfluorohexanoic acid (PFHxA)	25.0	21.9		ng/L		88	70 - 130
Perfluorododecanoic acid (PFDoA)	25.0	21.7		ng/L		87	70 - 130
Perfluorooctanoic acid (PFOA)	25.0	22.2		ng/L		89	70 - 130
Perfluorodecanoic acid (PFDA)	25.0	23.6		ng/L		94	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.0	24.3		ng/L		97	70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.0	25.0		ng/L		100	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.0	22.8		ng/L		91	70 - 130
Perfluorononanoic acid (PFNA)	25.0	24.9		ng/L		99	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.0	22.3		ng/L		89	70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.0	22.3		ng/L		89	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	25.0	23.6		ng/L		94	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.0	20.3		ng/L		81	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.0	22.1		ng/L		88	70 - 130

<i>Surrogate</i>	<i>LCS</i>	<i>LCS</i>	<i>Limits</i>
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
d5-NEtFOSAA	79		70 - 130
13C2 PFHxA	88		70 - 130
13C2 PFDA	90		70 - 130
13C3-GenX	83		70 - 130

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

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

Lab Sample ID: MRL 380-219039/20-A
Matrix: Water
Analysis Batch: 219214

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 219039

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	2.00	2.00	J	ng/L		100	50 - 150
Dimer Acid (HFPO-DA/GenX)							
Perfluorooctanesulfonic acid (PFOS)	2.00	2.13	J	ng/L		106	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.47	J	ng/L		123	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	1.94	J	ng/L		97	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.14	J	ng/L		107	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.14	J	ng/L		107	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.34	J	ng/L		117	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.05	J	ng/L		103	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.35	J	ng/L		117	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.18	J	ng/L		109	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.03	J	ng/L		101	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.14	J	ng/L		107	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.47	J	ng/L		123	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.44	J	ng/L		122	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.50	J	ng/L		125	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.05	J	ng/L		102	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.96	J	ng/L		98	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.02	J	ng/L		101	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	100		70 - 130
13C2 PFHxA	101		70 - 130
13C2 PFDA	112		70 - 130
13C3-GenX	100		70 - 130

Lab Sample ID: 380-207142-1 MS
Matrix: Drinking Water
Analysis Batch: 219214

Client Sample ID: HALAWA WELLS P1 (331-023-WL065)
Prep Type: Total/NA
Prep Batch: 219039

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		50.1	47.0		ng/L		94	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorooctanesulfonic acid (PFOS)	2.6		50.1	52.4		ng/L		99	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.1	52.2		ng/L		104	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.1	47.0		ng/L		94	70 - 130

Eurofins Pomona

QC Association Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

LCMS

Prep Batch: 219039

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-207142-1	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	537.1 DW	
380-207142-2	FB: HALAWA WELLS P1 (331-023-WL065)	Total/NA	Water	537.1 DW	
MBL 380-219039/19-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-219039/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-219039/20-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-207142-1 MS	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	537.1 DW	
380-207142-1 MSD	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	537.1 DW	

Prep Batch: 219210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-207142-1	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	533	
380-207142-2	FB: HALAWA WELLS P1 (331-023-WL065)	Total/NA	Water	533	
MBL 380-219210/20-A	Method Blank	Total/NA	Water	533	
LCS 380-219210/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-219210/21-A	Lab Control Sample	Total/NA	Water	533	
380-206165-E-1-A MS	Matrix Spike	Total/NA	Water	533	
380-206165-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 219214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-207142-1	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	EPA 537.1 V2	219039
380-207142-2	FB: HALAWA WELLS P1 (331-023-WL065)	Total/NA	Water	EPA 537.1 V2	219039
MBL 380-219039/19-A	Method Blank	Total/NA	Water	EPA 537.1 V2	219039
LCS 380-219039/21-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	219039
MRL 380-219039/20-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	219039
380-207142-1 MS	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	EPA 537.1 V2	219039
380-207142-1 MSD	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	EPA 537.1 V2	219039

Analysis Batch: 219378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-207142-1	HALAWA WELLS P1 (331-023-WL065)	Total/NA	Drinking Water	533	219210
380-207142-2	FB: HALAWA WELLS P1 (331-023-WL065)	Total/NA	Water	533	219210
MBL 380-219210/20-A	Method Blank	Total/NA	Water	533	219210
LCS 380-219210/22-A	Lab Control Sample	Total/NA	Water	533	219210
MRL 380-219210/21-A	Lab Control Sample	Total/NA	Water	533	219210
380-206165-E-1-A MS	Matrix Spike	Total/NA	Water	533	219210
380-206165-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	219210

Lab Chronicle

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

Client Sample ID: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-207142-1

Date Collected: 04/06/26 10:31

Matrix: Drinking Water

Date Received: 04/08/26 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			219210	N8NE	EA POM	04/10/26 17:14
Total/NA	Analysis	533		1	219378	M7ML	EA POM	04/11/26 17:54
Total/NA	Prep	537.1 DW			219039	G9MN	EA POM	04/10/26 01:46
Total/NA	Analysis	EPA 537.1 V2		1	219214	Y5FM	EA POM	04/10/26 17:05

Client Sample ID: FB: HALAWA WELLS P1 (331-023-WL065)

Lab Sample ID: 380-207142-2

Date Collected: 04/06/26 10:31

Matrix: Water

Date Received: 04/08/26 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			219210	N8NE	EA POM	04/10/26 17:14
Total/NA	Analysis	533		1	219378	M7ML	EA POM	04/11/26 18:03
Total/NA	Prep	537.1 DW			219039	G9MN	EA POM	04/10/26 01:46
Total/NA	Analysis	EPA 537.1 V2		1	219214	Y5FM	EA POM	04/10/26 20:07

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: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

Laboratory: Eurofins Pomona

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

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	01-31-26 *

- 1
- 2
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* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

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: RED-HILL

Job ID: 380-207142-1
SDG: PFAS: Halawa Wells P1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-207142-1	HALAWA WELLS P1 (331-023-WL065)	Drinking Water	04/06/26 10:31	04/08/26 10:00	HI0000331
380-207142-2	FB: HALAWA WELLS P1 (331-023-WL065)	Water	04/06/26 10:31	04/08/26 10:00	HI0000331

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Monrovia, CA (Suite 100)
 750 Royal Oaks Drive Suite 100
 Monrovia, CA 91016
 Phone (626) 386-1100

Chain of Custody Record



E A



Client Information		Sampler: bailey		Lab PM: Lopez, Maria		Carrier Tracking No(s):		COC No: 380-207142 COC	
Client Contact: Kirk Iwamoto		Phone: +1 808 748 5940		E-Mail: Maria.Lopez@et.eurofins.com		State of Origin:		Page: Page 1 of 1	
City & County of Honolulu		PWSID:		Analysis Requested		Job #:		Preservation Codes:	
Address: 630 South Beretania Street, Chemistry Lab		Due Date Requested:		Perform MS/MSD (Yes or No)		Field Filtered Sample (Yes or No)		M - Hexane	
City: Honolulu		TAT Requested (days):		SUBCONTRACT - 626 PAH Phys (EAL) + TICs		8015B_GRO_LL - (MOD) GRO		A - HCL	
State, Zip: HI, 96843		Compliance Project: Δ No		8015B_DRO_LL_CS - HNL Ranges - C10-C24/C24-C38/C8-C18		526.2_PRC - (MOD) 626plus PLUS TICs		B - NaOH	
Phone: 808-748-5840 (tel)		PO #: C20525101 exp 05312023		8015B_GRO_LL - (MOD) GRO		527.1_DW_PRC - 637.1 Full List		C - Zn Acetate	
Email: kiwamoto@hbws.org		WO #: 38001111		8015B_GRO_LL - (MOD) GRO		526.2_PRC - (MOD) 626plus PLUS TICs		D - Nitric Acid	
Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill		Project #: 38001111		SUBCONTRACT - 626 PAH Phys (EAL) + TICs		527.1_DW_PRC - 637.1 Full List		E - NaHSO4	
Site:		SSOW#: 38001111		Perform MS/MSD (Yes or No)		526.2_PRC - (MOD) 626plus PLUS TICs		F - MeOH	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		G - Matrix (Water, Seawater, Urine, etc.)	
Halawa Wells P1 (331-023-WL065)		6-Apr-2026		1031		G		H - Ascorbic Acid	
FB: Halawa Wells P1 (331-023-WL065)		6-Apr-2026		1031		G		I - Ice	
Possible Hazard Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		J - DI Water	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		6-Apr-2026		1031		G		K - EDTA	
Empty Kit Relinquished by		Date:		Date:		Date:		L - EDA	
Relinquished by:		Date/Time:		Date/Time:		Date/Time:		Other	
Relinquished by:		Date/Time:		Date/Time:		Date/Time:		Total Number of Containers	
Custody Seals Intact: Δ Yes Δ No		Date/Time:		Date/Time:		Date/Time:		Special Instructions/Note:	
Custody Seal No.		Date/Time:		Date/Time:		Date/Time:		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Method of Shipment: FedEx - 8704 (691 9961)		Date/Time: 4/8/26		Date/Time: 1000		Date/Time:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)	
Received by: <i>SM</i>		Date/Time: 4/8/26		Date/Time: 1000		Date/Time:		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other	
Received by:		Date/Time:		Date/Time:		Date/Time:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)	
Received by:		Date/Time:		Date/Time:		Date/Time:		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other	
Cooler Temperature(s) °C and Other Remarks: (B311) 3.9+0.2: 4.1 gpl. frozen		Date/Time:		Date/Time:		Date/Time:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)	



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-207142-1
SDG Number: PFAS: Halawa Wells P1

Login Number: 207142

List Number: 1

Creator: Gross, Drake

List Source: Eurofins Pomona

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

