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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

RED-HILL
PFAS: Ka'amilo Wells P1

JOB NUMBER

380-201238-1

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
Maria Lopez, Project Manager
Maria.Lopez@et.eurofinsus.com
(626)386-1100

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Definitions/Glossary

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

Job ID: 380-201238-1
SDG: PFAS: Ka'amilo 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: 380-201238-1

Job ID: 380-201238-1

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Job Narrative 380-201238-1

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 3/4/2026 10:01 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 2.0°C.

PFAS

EPA 537.1 and EPA 533 are two distinct methods for the analysis of PFAS in drinking water. The analyses are conducted on differing instrumentation, with calibrations, extraction solvents and sample preservatives being dissimilar among the two methods. Therefore it is probable and not unexpected to see the methods having slight variations in analytical results: Ka'amilo Wells P1 (380-201238-1). (XWB4)

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

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Detection Summary

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

Job ID: 380-201238-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-201238-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	3.0		2.0	ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.3		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.8		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.6		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.6		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	4.0		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.7		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanoic acid (PFHxA)	3.9		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	4.3		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	4.1		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.3		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.2		2.0	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-201238-2

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: 380-201238-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-201238-1

Date Collected: 03/02/26 12:26

Matrix: Water

Date Received: 03/04/26 10:01

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosfluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
Perfluorobutanesulfonic acid (PFBS)	3.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
Perfluorohexanesulfonic acid (PFHxS)	3.3		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
Perfluorohexanoic acid (PFHxA)	3.8		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
Perfluorooctanesulfonic acid (PFOS)	4.6		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
Perfluorooctanoic acid (PFOA)	3.6		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
Perfluoropentanoic acid (PFPeA)	4.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 17:50	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	85		50 - 200	03/07/26 05:29	03/08/26 17:50	1
13C6 PFDA	96		50 - 200	03/07/26 05:29	03/08/26 17:50	1
13C5 PFHxA	90		50 - 200	03/07/26 05:29	03/08/26 17:50	1
13C4 PFHpA	94		50 - 200	03/07/26 05:29	03/08/26 17:50	1
13C8 PFOA	96		50 - 200	03/07/26 05:29	03/08/26 17:50	1
13C9 PFNA	99		50 - 200	03/07/26 05:29	03/08/26 17:50	1
13C7 PFUnA	105		50 - 200	03/07/26 05:29	03/08/26 17:50	1
13C2 PFDoA	107		50 - 200	03/07/26 05:29	03/08/26 17:50	1
13C4 PFBA	104		50 - 200	03/07/26 05:29	03/08/26 17:50	1
13C5 PFPeA	97		50 - 200	03/07/26 05:29	03/08/26 17:50	1
13C3 PFBS	114		50 - 200	03/07/26 05:29	03/08/26 17:50	1

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Client Sample Results

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

Job ID: 380-201238-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-201238-1

Date Collected: 03/02/26 12:26

Matrix: Water

Date Received: 03/04/26 10:01

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	112		50 - 200	03/07/26 05:29	03/08/26 17:50	1
13C8 PFOS	112		50 - 200	03/07/26 05:29	03/08/26 17:50	1
13C2-4:2-FTS	117		50 - 200	03/07/26 05:29	03/08/26 17:50	1
13C2-6:2-FTS	111		50 - 200	03/07/26 05:29	03/08/26 17:50	1
13C2-8:2-FTS	116		50 - 200	03/07/26 05:29	03/08/26 17:50	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		03/05/26 01:31	03/05/26 19:11	1
Perfluorooctanesulfonic acid (PFOS)	5.7		2.0	ng/L		03/05/26 01:31	03/05/26 19:11	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:11	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:11	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:11	1
Perfluorohexanoic acid (PFHxA)	3.9		2.0	ng/L		03/05/26 01:31	03/05/26 19:11	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:11	1
Perfluorooctanoic acid (PFOA)	4.3		2.0	ng/L		03/05/26 01:31	03/05/26 19:11	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:11	1
Perfluorohexanesulfonic acid (PFHxS)	4.1		2.0	ng/L		03/05/26 01:31	03/05/26 19:11	1
Perfluorobutanesulfonic acid (PFBS)	3.3		2.0	ng/L		03/05/26 01:31	03/05/26 19:11	1
Perfluoroheptanoic acid (PFHpA)	2.2		2.0	ng/L		03/05/26 01:31	03/05/26 19:11	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:11	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:11	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:11	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:11	1
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	107		70 - 130	03/05/26 01:31	03/05/26 19:11	1
13C2 PFHxA	103		70 - 130	03/05/26 01:31	03/05/26 19:11	1
13C2 PFDA	110		70 - 130	03/05/26 01:31	03/05/26 19:11	1
13C3-GenX	98		70 - 130	03/05/26 01:31	03/05/26 19:11	1

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-201238-2

Date Collected: 03/02/26 12:26

Matrix: Water

Date Received: 03/04/26 10:01

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1

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Client Sample Results

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

Job ID: 380-201238-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-201238-2

Date Collected: 03/02/26 12:26

Matrix: Water

Date Received: 03/04/26 10:01

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		03/07/26 05:29	03/08/26 18:00	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	102		50 - 200	03/07/26 05:29	03/08/26 18:00	1
13C6 PFDA	114		50 - 200	03/07/26 05:29	03/08/26 18:00	1
13C5 PFHxA	114		50 - 200	03/07/26 05:29	03/08/26 18:00	1
13C4 PFHpA	110		50 - 200	03/07/26 05:29	03/08/26 18:00	1
13C8 PFOA	119		50 - 200	03/07/26 05:29	03/08/26 18:00	1
13C9 PFNA	120		50 - 200	03/07/26 05:29	03/08/26 18:00	1
13C7 PFUnA	120		50 - 200	03/07/26 05:29	03/08/26 18:00	1
13C2 PFDoA	119		50 - 200	03/07/26 05:29	03/08/26 18:00	1
13C4 PFBA	114		50 - 200	03/07/26 05:29	03/08/26 18:00	1
13C5 PFPeA	111		50 - 200	03/07/26 05:29	03/08/26 18:00	1
13C3 PFBS	116		50 - 200	03/07/26 05:29	03/08/26 18:00	1
13C3 PFHxS	116		50 - 200	03/07/26 05:29	03/08/26 18:00	1
13C8 PFOS	116		50 - 200	03/07/26 05:29	03/08/26 18:00	1
13C2-4:2-FTS	113		50 - 200	03/07/26 05:29	03/08/26 18:00	1
13C2-6:2-FTS	110		50 - 200	03/07/26 05:29	03/08/26 18:00	1
13C2-8:2-FTS	116		50 - 200	03/07/26 05:29	03/08/26 18:00	1

Client Sample Results

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

Job ID: 380-201238-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-201238-2

Date Collected: 03/02/26 12:26

Matrix: Water

Date Received: 03/04/26 10:01

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		03/05/26 01:31	03/05/26 19:21	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:21	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:21	1
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:21	1
N-ethylperfluorooctanesulfonamideacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:21	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:21	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:21	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:21	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:21	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:21	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:21	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:21	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:21	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:21	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:21	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:21	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		03/05/26 01:31	03/05/26 19:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	111		70 - 130	03/05/26 01:31	03/05/26 19:21	1
13C2 PFHxA	108		70 - 130	03/05/26 01:31	03/05/26 19:21	1
13C2 PFDA	111		70 - 130	03/05/26 01:31	03/05/26 19:21	1
13C3-GenX	101		70 - 130	03/05/26 01:31	03/05/26 19:21	1

Action Limit Summary

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

Job ID: 380-201238-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-201238-1

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.3		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.6		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	3.6		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)	5.7		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	4.3		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	4.1		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: Ka'amilo Wells P1

Lab Sample ID: 380-201238-2

Compliance Check

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

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

Surrogate Summary

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

Job ID: 380-201238-1
 SDG: PFAS: Ka'amilo Wells P1

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)
380-200428-B-1-A MS	Matrix Spike	110	109	114	104
380-200428-B-1-B MSD	Matrix Spike Duplicate	104	104	109	95
380-201238-1	Ka'amilo Wells P1	107	103	110	98
380-201238-2	FB: Ka'amilo Wells P1	111	108	111	101
LCS 380-210869/21-A	Lab Control Sample	100	100	108	91
MBL 380-210869/19-A	Method Blank	90	84	92	72
MRL 380-210869/20-A	Lab Control Sample	96	89	102	77

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: 380-201238-1
 SDG: PFAS: Ka'amilo Wells P1

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)	PFDoA (50-200)
380-201238-1	Ka'amilo Wells P1	85	96	90	94	96	99	105	107
380-201238-2	FB: Ka'amilo Wells P1	102	114	114	110	119	120	120	119
380-201381-B-1-A MS	Matrix Spike	109	116	108	110	114	121	122	121
380-201381-C-1-A MSD	Matrix Spike Duplicate	106	116	107	109	117	115	119	123
LCS 380-211527/22-A	Lab Control Sample	95	117	110	111	112	116	121	122
MBL 380-211527/20-A	Method Blank	94	116	107	109	121	122	118	125
MRL 380-211527/21-A	Lab Control Sample	98	116	109	105	116	116	113	115

		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)
380-201238-1	Ka'amilo Wells P1	104	97	114	112	112	117	111	116
380-201238-2	FB: Ka'amilo Wells P1	114	111	116	116	116	113	110	116
380-201381-B-1-A MS	Matrix Spike	114	129	113	112	115	120	121	121
380-201381-C-1-A MSD	Matrix Spike Duplicate	114	132	110	117	116	134	135	124
LCS 380-211527/22-A	Lab Control Sample	111	107	111	115	113	106	109	112
MBL 380-211527/20-A	Method Blank	117	110	121	117	121	118	118	117
MRL 380-211527/21-A	Lab Control Sample	112	111	117	113	116	116	111	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

QC Sample Results

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

Job ID: 380-201238-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: MBL 380-211527/20-A
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 211527

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosfluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		03/07/26 05:29	03/08/26 14:22	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	94		50 - 200	03/07/26 05:29	03/08/26 14:22	1
13C6 PFDA	116		50 - 200	03/07/26 05:29	03/08/26 14:22	1
13C5 PFHxA	107		50 - 200	03/07/26 05:29	03/08/26 14:22	1
13C4 PFHpA	109		50 - 200	03/07/26 05:29	03/08/26 14:22	1
13C8 PFOA	121		50 - 200	03/07/26 05:29	03/08/26 14:22	1
13C9 PFNA	122		50 - 200	03/07/26 05:29	03/08/26 14:22	1
13C7 PFUnA	118		50 - 200	03/07/26 05:29	03/08/26 14:22	1
13C2 PFDoA	125		50 - 200	03/07/26 05:29	03/08/26 14:22	1
13C4 PFBA	117		50 - 200	03/07/26 05:29	03/08/26 14:22	1
13C5 PFPeA	110		50 - 200	03/07/26 05:29	03/08/26 14:22	1
13C3 PFBS	121		50 - 200	03/07/26 05:29	03/08/26 14:22	1
13C3 PFHxS	117		50 - 200	03/07/26 05:29	03/08/26 14:22	1

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QC Sample Results

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

Job ID: 380-201238-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: MBL 380-211527/20-A
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 211527

<i>Isotope Dilution</i>	<i>MBL %Recovery</i>	<i>MBL Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C8 PFOS	121		50 - 200	03/07/26 05:29	03/08/26 14:22	1
13C2-4:2-FTS	118		50 - 200	03/07/26 05:29	03/08/26 14:22	1
13C2-6:2-FTS	118		50 - 200	03/07/26 05:29	03/08/26 14:22	1
13C2-8:2-FTS	117		50 - 200	03/07/26 05:29	03/08/26 14:22	1

Lab Sample ID: LCS 380-211527/22-A
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 211527

<i>Analyte</i>	<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.0	51.6		ng/L		86	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.0	58.4		ng/L		97	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.0	56.2		ng/L		94	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.0	57.6		ng/L		96	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.0	60.2		ng/L		100	70 - 130
Perfluorodecanoic acid (PFDA)	60.0	58.6		ng/L		98	70 - 130
Perfluorododecanoic acid (PFDoA)	60.0	58.2		ng/L		97	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.0	57.5		ng/L		96	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.0	56.2		ng/L		94	70 - 130
Perfluorohexanoic acid (PFHxA)	60.0	55.3		ng/L		92	70 - 130
Perfluorononanoic acid (PFNA)	60.0	56.3		ng/L		94	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.0	57.3		ng/L		95	70 - 130
Perfluorooctanoic acid (PFOA)	60.0	57.4		ng/L		96	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.0	57.4		ng/L		96	70 - 130
Perfluorobutanoic acid (PFBA)	60.0	58.5		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.0	62.3		ng/L		104	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.0	60.0		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.0	60.1		ng/L		100	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.0	64.7		ng/L		108	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.0	60.3		ng/L		100	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.0	61.9		ng/L		103	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.0	57.1		ng/L		95	70 - 130
Perfluoropentanoic acid (PFPeA)	60.0	56.8		ng/L		95	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.0	57.5		ng/L		96	70 - 130

QC Sample Results

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

Job ID: 380-201238-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: LCS 380-211527/22-A
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 211527

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	60.0	56.1		ng/L		94	70 - 130
LCS LCS							
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	95		50 - 200				
13C6 PFDA	117		50 - 200				
13C5 PFHxA	110		50 - 200				
13C4 PFHpA	111		50 - 200				
13C8 PFOA	112		50 - 200				
13C9 PFNA	116		50 - 200				
13C7 PFUnA	121		50 - 200				
13C2 PFDoA	122		50 - 200				
13C4 PFBA	111		50 - 200				
13C5 PFPeA	107		50 - 200				
13C3 PFBS	111		50 - 200				
13C3 PFHxS	115		50 - 200				
13C8 PFOS	113		50 - 200				
13C2-4:2-FTS	106		50 - 200				
13C2-6:2-FTS	109		50 - 200				
13C2-8:2-FTS	112		50 - 200				

Lab Sample ID: MRL 380-211527/21-A
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 211527

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.83	J	ng/L		91	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	1.99	J	ng/L		99	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.21	J	ng/L		110	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.18	J	ng/L		109	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.09	J	ng/L		104	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.22	J	ng/L		111	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.20	J	ng/L		110	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.09	J	ng/L		104	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.20	J	ng/L		110	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.13	J	ng/L		106	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.13	J	ng/L		106	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.07	J	ng/L		104	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.19	J	ng/L		109	50 - 150

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QC Sample Results

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

Job ID: 380-201238-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: MRL 380-211527/21-A
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 211527

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.25	J	ng/L		112	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.36	J	ng/L		118	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.39	J	ng/L		119	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	1.99	J	ng/L		99	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.00	2.21	J	ng/L		110	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.27	J	ng/L		113	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	2.09	J	ng/L		104	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.15	J	ng/L		107	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	2.13	J	ng/L		106	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	2.15	J	ng/L		107	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	98		50 - 200
13C6 PFDA	116		50 - 200
13C5 PFHxA	109		50 - 200
13C4 PFHpA	105		50 - 200
13C8 PFOA	116		50 - 200
13C9 PFNA	116		50 - 200
13C7 PFUnA	113		50 - 200
13C2 PFDoA	115		50 - 200
13C4 PFBA	112		50 - 200
13C5 PFPeA	111		50 - 200
13C3 PFBS	117		50 - 200
13C3 PFHxS	113		50 - 200
13C8 PFOS	116		50 - 200
13C2-4:2-FTS	116		50 - 200
13C2-6:2-FTS	111		50 - 200
13C2-8:2-FTS	117		50 - 200

Lab Sample ID: 380-201381-B-1-A MS
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 211527

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		60.1	52.9		ng/L		88	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.1	58.6		ng/L		98	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.1	56.8		ng/L		94	70 - 130

QC Sample Results

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

Job ID: 380-201238-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: 380-201381-B-1-A MS
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 211527

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		60.1	56.4		ng/L		94	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	2.4		60.1	60.8		ng/L		97	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		60.1	58.0		ng/L		97	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.1	59.4		ng/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		60.1	61.2		ng/L		99	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.1	59.4		ng/L		96	70 - 130
Perfluorohexanoic acid (PFHxA)	3.2		60.1	59.2		ng/L		93	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.1	55.7		ng/L		93	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.1	58.2		ng/L		94	70 - 130
Perfluorooctanoic acid (PFOA)	3.5		60.1	59.9		ng/L		94	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.1	56.8		ng/L		94	70 - 130
Perfluorobutanoic acid (PFBA)	2.0		60.1	58.6		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.1	61.5		ng/L		102	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.1	60.4		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.1	60.9		ng/L		101	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.1	61.7		ng/L		103	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.1	62.4		ng/L		104	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.1	70.4		ng/L		117	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.1	57.4		ng/L		95	70 - 130
Perfluoropentanoic acid (PFPeA)	2.2		60.1	57.1		ng/L		91	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.1	57.7		ng/L		96	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.1	57.5		ng/L		96	70 - 130

Isotope Dilution	MS MS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	109		50 - 200
13C6 PFDA	116		50 - 200
13C5 PFHxA	108		50 - 200
13C4 PFHpA	110		50 - 200
13C8 PFOA	114		50 - 200
13C9 PFNA	121		50 - 200
13C7 PFUnA	122		50 - 200
13C2 PFDoA	121		50 - 200
13C4 PFBA	114		50 - 200
13C5 PFPeA	129		50 - 200
13C3 PFBS	113		50 - 200
13C3 PFHxS	112		50 - 200
13C8 PFOS	115		50 - 200

QC Sample Results

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

Job ID: 380-201238-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: 380-201381-B-1-A MS
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 211527

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
13C2-4:2-FTS	120		50 - 200
13C2-6:2-FTS	121		50 - 200
13C2-8:2-FTS	121		50 - 200

Lab Sample ID: 380-201381-C-1-A MSD
Matrix: Water
Analysis Batch: 211576

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 211527

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.1	54.4		ng/L		90	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.1	58.7		ng/L		98	70 - 130	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.1	60.2		ng/L		100	70 - 130	6	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.1	61.3		ng/L		102	70 - 130	8	30
Perfluorobutanesulfonic acid (PFBS)	2.4		60.1	65.1		ng/L		104	70 - 130	7	30
Perfluorodecanoic acid (PFDA)	<2.0		60.1	58.9		ng/L		98	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.1	60.3		ng/L		100	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.1	61.9		ng/L		100	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.1	58.8		ng/L		95	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	3.2		60.1	60.9		ng/L		96	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		60.1	58.6		ng/L		97	70 - 130	5	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.1	58.9		ng/L		96	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	3.5		60.1	60.7		ng/L		95	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.1	58.9		ng/L		98	70 - 130	4	30
Perfluorobutanoic acid (PFBA)	2.0		60.1	61.8		ng/L		99	70 - 130	5	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.1	62.0		ng/L		103	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.1	58.9		ng/L		98	70 - 130	3	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.1	61.3		ng/L		102	70 - 130	1	30
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.1	63.0		ng/L		105	70 - 130	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.1	65.9		ng/L		110	70 - 130	5	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.1	69.8		ng/L		116	70 - 130	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.1	59.5		ng/L		99	70 - 130	4	30
Perfluoropentanoic acid (PFPeA)	2.2		60.1	59.3		ng/L		95	70 - 130	4	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.1	59.5		ng/L		99	70 - 130	3	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.1	59.0		ng/L		98	70 - 130	2	30

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QC Sample Results

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

Job ID: 380-201238-1
SDG: PFAS: Ka'amilo Wells P1

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

<i>Isotope Dilution</i>	<i>MSD</i>	<i>MSD</i>	<i>Limits</i>
<i>%Recovery</i>	<i>Qualifier</i>		
13C3 HFPO-DA	106		50 - 200
13C6 PFDA	116		50 - 200
13C5 PFHxA	107		50 - 200
13C4 PFHpA	109		50 - 200
13C8 PFOA	117		50 - 200
13C9 PFNA	115		50 - 200
13C7 PFUnA	119		50 - 200
13C2 PFDoA	123		50 - 200
13C4 PFBA	114		50 - 200
13C5 PFPeA	132		50 - 200
13C3 PFBS	110		50 - 200
13C3 PFHxS	117		50 - 200
13C8 PFOS	116		50 - 200
13C2-4:2-FTS	134		50 - 200
13C2-6:2-FTS	135		50 - 200
13C2-8:2-FTS	124		50 - 200

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

Lab Sample ID: MBL 380-210869/19-A
Matrix: Water
Analysis Batch: 210999

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 210869

<i>Analyte</i>	<i>MBL</i>	<i>MBL</i>	<i>RL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
	<i>Result</i>	<i>Qualifier</i>						
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		03/05/26 01:31	03/05/26 16:12	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		03/05/26 01:31	03/05/26 16:12	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		03/05/26 01:31	03/05/26 16:12	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		03/05/26 01:31	03/05/26 16:12	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		03/05/26 01:31	03/05/26 16:12	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		03/05/26 01:31	03/05/26 16:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		03/05/26 01:31	03/05/26 16:12	1
<i>Surrogate</i>	<i>MBL</i>	<i>MBL</i>	<i>Limits</i>			<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
	<i>%Recovery</i>	<i>Qualifier</i>						
d5-NEtFOSAA	90		70 - 130			03/05/26 01:31	03/05/26 16:12	1
13C2 PFHxA	84		70 - 130			03/05/26 01:31	03/05/26 16:12	1
13C2 PFDA	92		70 - 130			03/05/26 01:31	03/05/26 16:12	1

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QC Sample Results

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

Job ID: 380-201238-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: MBL 380-210869/19-A
Matrix: Water
Analysis Batch: 210999

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 210869

<i>Surrogate</i>	<i>MBL</i>	<i>MBL</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3-GenX	72	Qualifier	70 - 130	03/05/26 01:31	03/05/26 16:12	1

Lab Sample ID: LCS 380-210869/21-A
Matrix: Water
Analysis Batch: 210999

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 210869

<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>Limits</i>
	<i>Added</i>	<i>Result</i>	<i>Qualifier</i>					
Hexafluoropropylene Oxide	25.1	21.4		ng/L		85		70 - 130
Dimer Acid (HFPO-DA/GenX)								
Perfluorooctanesulfonic acid (PFOS)	25.1	25.0		ng/L		100		70 - 130
Perfluoroundecanoic acid (PFUnA)	25.1	26.1		ng/L		104		70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.1	24.3		ng/L		97		70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.1	25.2		ng/L		101		70 - 130
Perfluorohexanoic acid (PFHxA)	25.1	23.5		ng/L		94		70 - 130
Perfluorododecanoic acid (PFDoA)	25.1	25.7		ng/L		103		70 - 130
Perfluorooctanoic acid (PFOA)	25.1	25.2		ng/L		101		70 - 130
Perfluorodecanoic acid (PFDA)	25.1	26.0		ng/L		104		70 - 130
Perfluorohexanesulfonic acid (PFHxS)	25.1	25.5		ng/L		102		70 - 130
Perfluorobutanesulfonic acid (PFBS)	25.1	24.1		ng/L		96		70 - 130
Perfluoroheptanoic acid (PFHpA)	25.1	25.8		ng/L		103		70 - 130
Perfluorononanoic acid (PFNA)	25.1	25.8		ng/L		103		70 - 130
Perfluorotetradecanoic acid (PFTA)	25.1	21.6		ng/L		86		70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.1	26.8		ng/L		107		70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	25.1	23.8		ng/L		95		70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	25.1	24.0		ng/L		96		70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	25.1	21.4		ng/L		86		70 - 130

<i>Surrogate</i>	<i>LCS</i>	<i>LCS</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
d5-NEtFOSAA	100		70 - 130
13C2 PFHxA	100		70 - 130
13C2 PFDA	108		70 - 130
13C3-GenX	91		70 - 130

QC Sample Results

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

Job ID: 380-201238-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: MRL 380-210869/20-A
Matrix: Water
Analysis Batch: 210999

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 210869

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	1.55	J	ng/L		77	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.20	J	ng/L		110	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.00	J	ng/L		99	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.01	1.97	J	ng/L		98	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.01	1.97	J	ng/L		98	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	1.85	J	ng/L		92	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	1.97	J	ng/L		98	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	1.94	J	ng/L		97	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.10	J	ng/L		104	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.22	J	ng/L		110	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.06	J	ng/L		102	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	1.99	J	ng/L		99	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.21	J	ng/L		110	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.01	1.80	J	ng/L		90	50 - 150
Perfluorotridecanoic acid (PFTTrDA)	2.01	2.03	J	ng/L		101	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	1.96	J	ng/L		98	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	1.90	J	ng/L		95	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	1.67	J	ng/L		83	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	96		70 - 130
13C2 PFHxA	89		70 - 130
13C2 PFDA	102		70 - 130
13C3-GenX	77		70 - 130

Lab Sample ID: 380-200428-B-1-A MS
Matrix: Water
Analysis Batch: 210999

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 210869

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	23.6		ng/L		94	70 - 130
Perfluorooctanesulfonic acid (PFOS)	2.9		25.1	28.6		ng/L		103	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	27.0		ng/L		108	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	26.4		ng/L		105	70 - 130

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QC Association Summary

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

Job ID: 380-201238-1
SDG: PFAS: Ka'amilo Wells P1

LCMS

Prep Batch: 210869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-201238-1	Ka'amilo Wells P1	Total/NA	Water	537.1 DW	
380-201238-2	FB: Ka'amilo Wells P1	Total/NA	Water	537.1 DW	
MBL 380-210869/19-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-210869/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-210869/20-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-200428-B-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-200428-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 210999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-201238-1	Ka'amilo Wells P1	Total/NA	Water	EPA 537.1 V2	210869
380-201238-2	FB: Ka'amilo Wells P1	Total/NA	Water	EPA 537.1 V2	210869
MBL 380-210869/19-A	Method Blank	Total/NA	Water	EPA 537.1 V2	210869
LCS 380-210869/21-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	210869
MRL 380-210869/20-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	210869
380-200428-B-1-A MS	Matrix Spike	Total/NA	Water	EPA 537.1 V2	210869
380-200428-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	EPA 537.1 V2	210869

Prep Batch: 211527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-201238-1	Ka'amilo Wells P1	Total/NA	Water	533	
380-201238-2	FB: Ka'amilo Wells P1	Total/NA	Water	533	
MBL 380-211527/20-A	Method Blank	Total/NA	Water	533	
LCS 380-211527/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-211527/21-A	Lab Control Sample	Total/NA	Water	533	
380-201381-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-201381-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 211576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-201238-1	Ka'amilo Wells P1	Total/NA	Water	533	211527
380-201238-2	FB: Ka'amilo Wells P1	Total/NA	Water	533	211527
MBL 380-211527/20-A	Method Blank	Total/NA	Water	533	211527
LCS 380-211527/22-A	Lab Control Sample	Total/NA	Water	533	211527
MRL 380-211527/21-A	Lab Control Sample	Total/NA	Water	533	211527
380-201381-B-1-A MS	Matrix Spike	Total/NA	Water	533	211527
380-201381-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	211527

Lab Chronicle

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

Job ID: 380-201238-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: Ka'amilo Wells P1

Lab Sample ID: 380-201238-1

Date Collected: 03/02/26 12:26

Matrix: Water

Date Received: 03/04/26 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			211527	XTD8	EA POM	03/07/26 05:29
Total/NA	Analysis	533		1	211576	SZ9R	EA POM	03/08/26 17:50
Total/NA	Prep	537.1 DW			210869	G9MN	EA POM	03/05/26 01:31
Total/NA	Analysis	EPA 537.1 V2		1	210999	Y5FM	EA POM	03/05/26 19:11

Client Sample ID: FB: Ka'amilo Wells P1

Lab Sample ID: 380-201238-2

Date Collected: 03/02/26 12:26

Matrix: Water

Date Received: 03/04/26 10:01

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			211527	XTD8	EA POM	03/07/26 05:29
Total/NA	Analysis	533		1	211576	SZ9R	EA POM	03/08/26 18:00
Total/NA	Prep	537.1 DW			210869	G9MN	EA POM	03/05/26 01:31
Total/NA	Analysis	EPA 537.1 V2		1	210999	Y5FM	EA POM	03/05/26 19:21

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: 380-201238-1
SDG: PFAS: Ka'amilo 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
- 3
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- 17

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

Method Summary

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

Job ID: 380-201238-1
SDG: PFAS: Ka'amilo 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: 380-201238-1
SDG: PFAS: Ka'amilo Wells P1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
380-201238-1	Ka'amilo Wells P1	Water	03/02/26 12:26	03/04/26 10:01	Hawaii
380-201238-2	FB: Ka'amilo Wells P1	Water	03/02/26 12:26	03/04/26 10:01	Hawaii


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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



Environment Testing
 America

Client Information		Sampler: Bailey	Lab PIN: Lopez, Maria	Carrier Tracking No(s):	COC No:
Client Contact: kirk Iwamoto		Phone: +1 808 748 5840	E-Mail: Maria.Lopez@et.euronisus.com	State of Origin:	Page:
Company: City & County of Honolulu		PWSID:		Job #:	
Address: 630 South Beretania Street, Chemistry Lab Honolulu		Due Date Requested:		Analysis Requested	
City: Honolulu		TAT Requested (days): RUSH		Preservation Codes: 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: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)	
State, Zip: HI, 96843		Compliance Project: Δ No		Total Number of Containers: <input checked="" type="checkbox"/>	
Phone: 808-748-5840 (tel)		PO #: C20525101 exp 05312023		Special Instructions/Note:	
Email: kiwamoto@hbws.org		WO #: 38001111		 380-201238 COC	
Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill		Project #: 38001111		633 - All Analytes 637.1_DW_PREC - 637.1 Full List 625.2_PREC - (MOD) 625plus PLUS TICs 80168_DRO_LL_CS - HNL Ranges: C10-C24/C24-C38/C8-C18 80168_GRO_LL - (MOD) GRO SUBCONTRACT - 625 PAH Phyla LL (EAL) + TICs Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/>	
Site:		SSOWN#:		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/>	
Sample Identification		Sample Date		R A Q OA Y I	
Ka'amilo Wells P1		2-Mar-2026		3 3	
Sample Type (C=comp, G=grab)		Sample Time		A Q	
G		1226		1 1	
Matrix (Inorganic, Semisolid, Organic)		Preservation Code:		Special Instructions/Note:	
Water		G			
FB: Ka'amilo Wells P1		2-Mar-2026			
Water		1226			
<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		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Deliverable Requested: I, II, III, IV, Other (specify)		Date:		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Date:		Method of Shipment: FedEx	
Relinquished by:		Date/Time:		Received by:	
Relinquished by:		Date/Time:		Received by:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: (631A) 18-10-2-2.0 g/L of TOSSON	



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-201238-1
SDG Number: PFAS: Ka'amilo Wells P1

Login Number: 201238
List Number: 1
Creator: Ngo, Theodore

List Source: Eurofins Pomona

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

