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ANALYTICAL REPORT

PREPARED FOR

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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

380-213713-1

Eurofins Pomona

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins 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: 380-213713-1
SDG: PFAS: Ka'amilo Wells P1

Qualifiers

LCMS

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
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: 380-213713-1

Job ID: 380-213713-1

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Job Narrative 380-213713-1

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 5/13/2026 9:28 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 2.6°C.

PFAS

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

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Detection Summary

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

Job ID: 380-213713-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: Ka'amilo Wells P1 (331-031-WL008)
PWSID Number: HI0000331

Lab Sample ID: 380-213713-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	3.3		2.0	ng/L	1		533	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.0		2.0	ng/L	1		533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	3.7		2.0	ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	4.4		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.3		2.0	ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	4.1		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	4.4		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.8		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanoic acid (PFHxA)	4.8		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	4.8		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	4.3		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.7		2.0	ng/L	1		EPA 537.1 V2	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.5		2.0	ng/L	1		EPA 537.1 V2	Total/NA

Client Sample ID: FB: Ka'amilo Wells P1 (331-031-WL008)
PWSID Number: HI0000331

Lab Sample ID: 380-213713-2

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: 380-213713-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: Ka'amilo Wells P1 (331-031-WL008)

Lab Sample ID: 380-213713-1

Date Collected: 05/11/26 11:48

Matrix: Water

Date Received: 05/13/26 09:28

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-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
Perfluorobutanesulfonic acid (PFBS)	3.3		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
Perfluoroheptanoic acid (PFHpA)	2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
Perfluorohexanesulfonic acid (PFHxS)	3.7		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
Perfluorohexanoic acid (PFHxA)	4.4		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
Perfluorooctanesulfonic acid (PFOS)	5.3		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
Perfluorooctanoic acid (PFOA)	4.1		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
Perfluoropentanoic acid (PFPeA)	4.4		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:09	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	99		50 - 200	05/16/26 12:43	05/18/26 10:09	1
13C6 PFDA	108		50 - 200	05/16/26 12:43	05/18/26 10:09	1
13C5 PFHxA	100		50 - 200	05/16/26 12:43	05/18/26 10:09	1
13C4 PFHpA	106		50 - 200	05/16/26 12:43	05/18/26 10:09	1
13C8 PFOA	108		50 - 200	05/16/26 12:43	05/18/26 10:09	1
13C9 PFNA	109		50 - 200	05/16/26 12:43	05/18/26 10:09	1
13C7 PFUnA	114		50 - 200	05/16/26 12:43	05/18/26 10:09	1
13C2 PFDoA	106		50 - 200	05/16/26 12:43	05/18/26 10:09	1
13C4 PFBA	111		50 - 200	05/16/26 12:43	05/18/26 10:09	1
13C5 PFPeA	112		50 - 200	05/16/26 12:43	05/18/26 10:09	1
13C3 PFBS	105		50 - 200	05/16/26 12:43	05/18/26 10:09	1

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Client Sample Results

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

Job ID: 380-213713-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: Ka'amilo Wells P1 (331-031-WL008)

Lab Sample ID: 380-213713-1

Date Collected: 05/11/26 11:48

Matrix: Water

Date Received: 05/13/26 09:28

PWSID Number: HI0000331

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	110		50 - 200	05/16/26 12:43	05/18/26 10:09	1
13C8 PFOS	108		50 - 200	05/16/26 12:43	05/18/26 10:09	1
13C2-4:2-FTS	117		50 - 200	05/16/26 12:43	05/18/26 10:09	1
13C2-6:2-FTS	111		50 - 200	05/16/26 12:43	05/18/26 10:09	1
13C2-8:2-FTS	110		50 - 200	05/16/26 12:43	05/18/26 10:09	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		05/16/26 11:15	05/18/26 09:07	1
Perfluorooctanesulfonic acid (PFOS)	5.8		2.0	ng/L		05/16/26 11:15	05/18/26 09:07	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:07	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:07	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:07	1
Perfluorohexanoic acid (PFHxA)	4.8		2.0	ng/L		05/16/26 11:15	05/18/26 09:07	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:07	1
Perfluorooctanoic acid (PFOA)	4.8		2.0	ng/L		05/16/26 11:15	05/18/26 09:07	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:07	1
Perfluorohexanesulfonic acid (PFHxS)	4.3		2.0	ng/L		05/16/26 11:15	05/18/26 09:07	1
Perfluorobutanesulfonic acid (PFBS)	3.7		2.0	ng/L		05/16/26 11:15	05/18/26 09:07	1
Perfluoroheptanoic acid (PFHpA)	2.5		2.0	ng/L		05/16/26 11:15	05/18/26 09:07	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:07	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:07	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:07	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:07	1
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:07	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	114		70 - 130	05/16/26 11:15	05/18/26 09:07	1
13C2 PFHxA	108		70 - 130	05/16/26 11:15	05/18/26 09:07	1
13C2 PFDA	120		70 - 130	05/16/26 11:15	05/18/26 09:07	1
13C3-GenX	115		70 - 130	05/16/26 11:15	05/18/26 09:07	1

Client Sample ID: FB: Ka'amilo Wells P1 (331-031-WL008)

Lab Sample ID: 380-213713-2

Date Collected: 05/11/26 11:48

Matrix: Water

Date Received: 05/13/26 09:28

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-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1

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Client Sample Results

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

Job ID: 380-213713-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: FB: Ka'amilo Wells P1 (331-031-WL008)

Lab Sample ID: 380-213713-2

Date Collected: 05/11/26 11:48

Matrix: Water

Date Received: 05/13/26 09:28

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
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		05/16/26 12:43	05/18/26 10:19	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	91		50 - 200	05/16/26 12:43	05/18/26 10:19	1
13C6 PFDA	103		50 - 200	05/16/26 12:43	05/18/26 10:19	1
13C5 PFHxA	105		50 - 200	05/16/26 12:43	05/18/26 10:19	1
13C4 PFHpA	100		50 - 200	05/16/26 12:43	05/18/26 10:19	1
13C8 PFOA	108		50 - 200	05/16/26 12:43	05/18/26 10:19	1
13C9 PFNA	109		50 - 200	05/16/26 12:43	05/18/26 10:19	1
13C7 PFUnA	107		50 - 200	05/16/26 12:43	05/18/26 10:19	1
13C2 PFDoA	105		50 - 200	05/16/26 12:43	05/18/26 10:19	1
13C4 PFBA	107		50 - 200	05/16/26 12:43	05/18/26 10:19	1
13C5 PFPeA	107		50 - 200	05/16/26 12:43	05/18/26 10:19	1
13C3 PFBS	107		50 - 200	05/16/26 12:43	05/18/26 10:19	1
13C3 PFHxS	108		50 - 200	05/16/26 12:43	05/18/26 10:19	1
13C8 PFOS	110		50 - 200	05/16/26 12:43	05/18/26 10:19	1
13C2-4:2-FTS	108		50 - 200	05/16/26 12:43	05/18/26 10:19	1
13C2-6:2-FTS	111		50 - 200	05/16/26 12:43	05/18/26 10:19	1
13C2-8:2-FTS	104		50 - 200	05/16/26 12:43	05/18/26 10:19	1

Client Sample Results

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

Job ID: 380-213713-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: FB: Ka'amilo Wells P1 (331-031-WL008)

Lab Sample ID: 380-213713-2

Date Collected: 05/11/26 11:48

Matrix: Water

Date Received: 05/13/26 09:28

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		05/16/26 11:15	05/18/26 09:16	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:16	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:16	1
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:16	1
N-ethylperfluorooctanesulfonamideacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:16	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:16	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:16	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:16	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:16	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:16	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:16	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:16	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:16	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:16	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:16	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:16	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		05/16/26 11:15	05/18/26 09:16	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	107		70 - 130			05/16/26 11:15	05/18/26 09:16	1
13C2 PFHxA	108		70 - 130			05/16/26 11:15	05/18/26 09:16	1
13C2 PFDA	110		70 - 130			05/16/26 11:15	05/18/26 09:16	1
13C3-GenX	104		70 - 130			05/16/26 11:15	05/18/26 09:16	1

Action Limit Summary

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

Job ID: 380-213713-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: Ka'amilo Wells P1 (331-031-WL008)

Lab Sample ID: 380-213713-1

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)	3.7		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	5.3		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	4.1		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)	5.8		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorooctanoic acid (PFOA)	4.8		ng/L	4	2.0	EPA 537.1 V2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	4.3		ng/L	10	2.0	EPA 537.1 V2	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	EPA 537.1 V2	Total/NA

Client Sample ID: FB: Ka'amilo Wells P1 (331-031-WL008)

Lab Sample ID: 380-213713-2

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: 380-213713-1
 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)
380-213692-E-1-A MS	Matrix Spike	110	115	126	129
380-213692-F-1-A MSD	Matrix Spike Duplicate	107	98	113	122
380-213713-1	Ka'amilo Wells P1 (331-031-WL008)	114	108	120	115
380-213713-2	FB: Ka'amilo Wells P1 (331-031-WL008)	107	108	110	104
LCS 380-227532/23-A	Lab Control Sample	111	121	120	123
MBL 380-227532/21-A	Method Blank	110	116	122	110
MRL 380-227532/22-A	Lab Control Sample	118	117	118	118

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: 380-213713-1
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)
380-212993-C-5-A MS	Matrix Spike	107	110	105	108	109	113	115	110
380-212993-D-5-A MSD	Matrix Spike Duplicate	96	104	107	101	101	107	108	104
380-213713-1	Ka'amilo Wells P1 (331-031-WL008)	99	108	100	106	108	109	114	106
380-213713-2	FB: Ka'amilo Wells P1 (331-031-WL008)	91	103	105	100	108	109	107	105
LCS 380-227535/22-A	Lab Control Sample	97	109	98	100	106	110	113	104
MBL 380-227535/20-A	Method Blank	98	107	105	105	113	110	116	110
MRL 380-227535/21-A	Lab Control Sample	98	111	104	104	112	112	108	106

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-212993-C-5-A MS	Matrix Spike	112	116	111	105	110	112	108	107
380-212993-D-5-A MSD	Matrix Spike Duplicate	106	111	104	100	105	122	109	102
380-213713-1	Ka'amilo Wells P1 (331-031-WL008)	111	112	105	110	108	117	111	110
380-213713-2	FB: Ka'amilo Wells P1 (331-031-WL008)	107	107	107	108	110	108	111	104
LCS 380-227535/22-A	Lab Control Sample	100	102	103	103	107	103	108	104
MBL 380-227535/20-A	Method Blank	104	99	104	106	108	109	107	107
MRL 380-227535/21-A	Lab Control Sample	104	104	107	113	110	107	108	106

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: 380-213713-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: MBL 380-227535/20-A
Matrix: Water
Analysis Batch: 227730

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 227535

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		05/16/26 12:43	05/18/26 06:46	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		05/16/26 12:43	05/18/26 06:46	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	98		50 - 200	05/16/26 12:43	05/18/26 06:46	1
13C6 PFDA	107		50 - 200	05/16/26 12:43	05/18/26 06:46	1
13C5 PFHxA	105		50 - 200	05/16/26 12:43	05/18/26 06:46	1
13C4 PFHpA	105		50 - 200	05/16/26 12:43	05/18/26 06:46	1
13C8 PFOA	113		50 - 200	05/16/26 12:43	05/18/26 06:46	1
13C9 PFNA	110		50 - 200	05/16/26 12:43	05/18/26 06:46	1
13C7 PFUnA	116		50 - 200	05/16/26 12:43	05/18/26 06:46	1
13C2 PFDoA	110		50 - 200	05/16/26 12:43	05/18/26 06:46	1
13C4 PFBA	104		50 - 200	05/16/26 12:43	05/18/26 06:46	1
13C5 PFPeA	99		50 - 200	05/16/26 12:43	05/18/26 06:46	1
13C3 PFBS	104		50 - 200	05/16/26 12:43	05/18/26 06:46	1
13C3 PFHxS	106		50 - 200	05/16/26 12:43	05/18/26 06:46	1

Eurofins Pomona

QC Sample Results

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

Job ID: 380-213713-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: MBL 380-227535/20-A
Matrix: Water
Analysis Batch: 227730

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 227535

<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	108		50 - 200	05/16/26 12:43	05/18/26 06:46	1
13C2-4:2-FTS	109		50 - 200	05/16/26 12:43	05/18/26 06:46	1
13C2-6:2-FTS	107		50 - 200	05/16/26 12:43	05/18/26 06:46	1
13C2-8:2-FTS	107		50 - 200	05/16/26 12:43	05/18/26 06:46	1

Lab Sample ID: LCS 380-227535/22-A
Matrix: Water
Analysis Batch: 227730

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 227535

<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)	60.1	59.1		ng/L		98	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.1	55.7		ng/L		93	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.1	65.4		ng/L		109	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.1	60.8		ng/L		101	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.1	58.0		ng/L		96	70 - 130
Perfluorodecanoic acid (PFDA)	60.1	57.2		ng/L		95	70 - 130
Perfluorododecanoic acid (PFDoA)	60.1	61.3		ng/L		102	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.1	60.5		ng/L		101	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.1	59.9		ng/L		100	70 - 130
Perfluorohexanoic acid (PFHxA)	60.1	62.5		ng/L		104	70 - 130
Perfluorononanoic acid (PFNA)	60.1	56.8		ng/L		95	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.1	58.5		ng/L		97	70 - 130
Perfluorooctanoic acid (PFOA)	60.1	56.9		ng/L		95	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.1	58.9		ng/L		98	70 - 130
Perfluorobutanoic acid (PFBA)	60.1	60.3		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.1	60.0		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.1	57.8		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.1	56.8		ng/L		94	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.1	59.2		ng/L		99	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.1	58.8		ng/L		98	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.1	63.5		ng/L		106	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.1	57.4		ng/L		95	70 - 130
Perfluoropentanoic acid (PFPeA)	60.1	60.2		ng/L		100	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.1	58.8		ng/L		98	70 - 130

QC Sample Results

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

Job ID: 380-213713-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: LCS 380-227535/22-A
Matrix: Water
Analysis Batch: 227730

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 227535

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	60.1	58.7		ng/L		98	70 - 130
LCS LCS							
Isotope Dilution	%Recovery	Qualifier	Limits				
13C3 HFPO-DA	97		50 - 200				
13C6 PFDA	109		50 - 200				
13C5 PFHxA	98		50 - 200				
13C4 PFHpA	100		50 - 200				
13C8 PFOA	106		50 - 200				
13C9 PFNA	110		50 - 200				
13C7 PFUnA	113		50 - 200				
13C2 PFDoA	104		50 - 200				
13C4 PFBA	100		50 - 200				
13C5 PFPeA	102		50 - 200				
13C3 PFBS	103		50 - 200				
13C3 PFHxS	103		50 - 200				
13C8 PFOS	107		50 - 200				
13C2-4:2-FTS	103		50 - 200				
13C2-6:2-FTS	108		50 - 200				
13C2-8:2-FTS	104		50 - 200				

Lab Sample ID: MRL 380-227535/21-A
Matrix: Water
Analysis Batch: 227730

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 227535

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.86	J	ng/L		93	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	1.96	J	ng/L		98	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.08	J	ng/L		104	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.21	J	ng/L		111	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.98	J	ng/L		99	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.03	J	ng/L		102	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.21	J	ng/L		111	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.21	J	ng/L		110	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	1.99	J	ng/L		99	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.22	J	ng/L		111	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.00	J	ng/L		100	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.03	J	ng/L		102	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.05	J	ng/L		103	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.11	J	ng/L		105	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.15	J	ng/L		108	50 - 150

Eurofins Pomona

QC Sample Results

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

Job ID: 380-213713-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: MRL 380-227535/21-A
Matrix: Water
Analysis Batch: 227730

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 227535

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.02	J	ng/L		101	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.12	J	ng/L		106	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.31	J	ng/L		116	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	1.96	J	ng/L		98	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.00	1.85	J	ng/L		93	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	2.04	J	ng/L		102	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	2.02	J	ng/L		101	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	1.81	J	ng/L		91	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	MRL Limits
13C3 HFPO-DA	98		50 - 200
13C6 PFDA	111		50 - 200
13C5 PFHxA	104		50 - 200
13C4 PFHpA	104		50 - 200
13C8 PFOA	112		50 - 200
13C9 PFNA	112		50 - 200
13C7 PFUnA	108		50 - 200
13C2 PFDoA	106		50 - 200
13C4 PFBA	104		50 - 200
13C5 PFPeA	104		50 - 200
13C3 PFBS	107		50 - 200
13C3 PFHxS	113		50 - 200
13C8 PFOS	110		50 - 200
13C2-4:2-FTS	107		50 - 200
13C2-6:2-FTS	108		50 - 200
13C2-8:2-FTS	106		50 - 200

Lab Sample ID: 380-212993-C-5-A MS
Matrix: Water
Analysis Batch: 227730

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 227535

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		120	110		ng/L		91	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		120	113		ng/L		94	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	117		ng/L		97	70 - 130

QC Sample Results

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

Job ID: 380-213713-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: 380-212993-C-5-A MS
Matrix: Water
Analysis Batch: 227730

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 227535

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide	<2.0		120	115		ng/L		96	70 - 130
Dimer Acid (HFPO-DA/GenX)									
Perfluorobutanesulfonic acid (PFBS)	<2.0		120	105		ng/L		87	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		120	113		ng/L		94	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		120	120		ng/L		100	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		120	116		ng/L		96	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		120	117		ng/L		97	70 - 130
Perfluorohexanoic acid (PFHxA)	2.1		120	122		ng/L		99	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		120	111		ng/L		92	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	110		ng/L		91	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		120	117		ng/L		97	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		120	117		ng/L		97	70 - 130
Perfluorobutanoic acid (PFBA)	5.8		120	119		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	116		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	120		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	117		ng/L		97	70 - 130
Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	<2.0		120	122		ng/L		101	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		120	104		ng/L		87	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	122		ng/L		101	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	117		ng/L		97	70 - 130
Perfluoropentanoic acid (PFPeA)	8.7		120	121		ng/L		93	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	108		ng/L		90	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	112		ng/L		93	70 - 130

Isotope Dilution	MS MS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	107		50 - 200
13C6 PFDA	110		50 - 200
13C5 PFHxA	105		50 - 200
13C4 PFHpA	108		50 - 200
13C8 PFOA	109		50 - 200
13C9 PFNA	113		50 - 200
13C7 PFUnA	115		50 - 200
13C2 PFDoA	110		50 - 200
13C4 PFBA	112		50 - 200
13C5 PFPeA	116		50 - 200
13C3 PFBS	111		50 - 200
13C3 PFHxS	105		50 - 200
13C8 PFOS	110		50 - 200

QC Sample Results

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

Job ID: 380-213713-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: 380-212993-C-5-A MS
Matrix: Water
Analysis Batch: 227730

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 227535

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
13C2-4:2-FTS	112		50 - 200
13C2-6:2-FTS	108		50 - 200
13C2-8:2-FTS	107		50 - 200

Lab Sample ID: 380-212993-D-5-A MSD
Matrix: Water
Analysis Batch: 227730

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 227535

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		120	115		ng/L		95	70 - 130	5	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		120	112		ng/L		93	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	123		ng/L		102	70 - 130	5	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		120	122		ng/L		101	70 - 130	5	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		120	110		ng/L		92	70 - 130	5	30
Perfluorodecanoic acid (PFDA)	<2.0		120	116		ng/L		96	70 - 130	3	30
Perfluorododecanoic acid (PFDoA)	<2.0		120	118		ng/L		98	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	<2.0		120	115		ng/L		95	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		120	123		ng/L		102	70 - 130	5	30
Perfluorohexanoic acid (PFHxA)	2.1		120	111		ng/L		91	70 - 130	9	30
Perfluorononanoic acid (PFNA)	<2.0		120	112		ng/L		93	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	113		ng/L		94	70 - 130	3	30
Perfluorooctanoic acid (PFOA)	<2.0		120	117		ng/L		97	70 - 130	0	30
Perfluoroundecanoic acid (PFUnA)	<2.0		120	119		ng/L		98	70 - 130	1	30
Perfluorobutanoic acid (PFBA)	5.8		120	119		ng/L		94	70 - 130	1	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	115		ng/L		95	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	106		ng/L		88	70 - 130	12	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	110		ng/L		91	70 - 130	7	30
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	111		ng/L		92	70 - 130	10	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		120	112		ng/L		93	70 - 130	7	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	119		ng/L		99	70 - 130	2	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	119		ng/L		99	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)	8.7		120	125		ng/L		97	70 - 130	3	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	112		ng/L		93	70 - 130	3	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	117		ng/L		97	70 - 130	5	30

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QC Sample Results

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

Job ID: 380-213713-1
SDG: PFAS: Ka'amilo Wells P1

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

Isotope Dilution	MSD MSD		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	96		50 - 200
13C6 PFDA	104		50 - 200
13C5 PFHxA	107		50 - 200
13C4 PFHpA	101		50 - 200
13C8 PFOA	101		50 - 200
13C9 PFNA	107		50 - 200
13C7 PFUnA	108		50 - 200
13C2 PFDoA	104		50 - 200
13C4 PFBA	106		50 - 200
13C5 PFPeA	111		50 - 200
13C3 PFBS	104		50 - 200
13C3 PFHxS	100		50 - 200
13C8 PFOS	105		50 - 200
13C2-4:2-FTS	122		50 - 200
13C2-6:2-FTS	109		50 - 200
13C2-8:2-FTS	102		50 - 200

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

Lab Sample ID: MBL 380-227532/21-A
Matrix: Water
Analysis Batch: 227732

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 227532

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		05/16/26 11:15	05/18/26 06:34	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		05/16/26 11:15	05/18/26 06:34	1
Surrogate	MBL MBL		Limits			Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
d5-NEtFOSAA	110		70 - 130			05/16/26 11:15	05/18/26 06:34	1
13C2 PFHxA	116		70 - 130			05/16/26 11:15	05/18/26 06:34	1
13C2 PFDA	122		70 - 130			05/16/26 11:15	05/18/26 06:34	1

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QC Sample Results

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

Job ID: 380-213713-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: MBL 380-227532/21-A
Matrix: Water
Analysis Batch: 227732

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 227532

<i>Surrogate</i>	<i>MBL</i>	<i>MBL</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3-GenX	110	Qualifier	70 - 130	05/16/26 11:15	05/18/26 06:34	1

Lab Sample ID: LCS 380-227532/23-A
Matrix: Water
Analysis Batch: 227732

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 227532

<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 Dimer Acid (HFPO-DA/GenX)	50.2	53.5		ng/L		107		70 - 130
Perfluorooctanesulfonic acid (PFOS)	50.2	52.8		ng/L		105		70 - 130
Perfluoroundecanoic acid (PFUnA)	50.2	55.8		ng/L		111		70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.2	51.4		ng/L		102		70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.2	52.8		ng/L		105		70 - 130
Perfluorohexanoic acid (PFHxA)	50.2	54.4		ng/L		108		70 - 130
Perfluorododecanoic acid (PFDoA)	50.2	54.6		ng/L		109		70 - 130
Perfluorooctanoic acid (PFOA)	50.2	55.0		ng/L		110		70 - 130
Perfluorodecanoic acid (PFDA)	50.2	53.0		ng/L		106		70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.2	51.0		ng/L		102		70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.2	50.5		ng/L		101		70 - 130
Perfluoroheptanoic acid (PFHpA)	50.2	53.6		ng/L		107		70 - 130
Perfluorononanoic acid (PFNA)	50.2	53.4		ng/L		106		70 - 130
Perfluorotetradecanoic acid (PFTA)	50.2	55.1		ng/L		110		70 - 130
Perfluorotridecanoic acid (PFTrDA)	50.2	62.7		ng/L		125		70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	50.2	52.2		ng/L		104		70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	50.2	52.5		ng/L		105		70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.2	51.5		ng/L		103		70 - 130

<i>Surrogate</i>	<i>LCS</i>	<i>LCS</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
d5-NEtFOSAA	111		70 - 130
13C2 PFHxA	121		70 - 130
13C2 PFDA	120		70 - 130
13C3-GenX	123		70 - 130

QC Sample Results

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

Job ID: 380-213713-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: MRL 380-227532/22-A
Matrix: Water
Analysis Batch: 227732

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 227532

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.40	J	ng/L		120	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.12	J	ng/L		106	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.42	J	ng/L		121	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.14	J	ng/L		107	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.33	J	ng/L		116	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.25	J	ng/L		112	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.28	J	ng/L		114	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.25	J	ng/L		112	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.22	J	ng/L		111	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.01	J	ng/L		100	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.02	J	ng/L		101	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.27	J	ng/L		113	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.24	J	ng/L		112	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.34	J	ng/L		117	50 - 150
Perfluorotridecanoic acid (PFTTrDA)	2.00	2.59	J	ng/L		129	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.18	J	ng/L		109	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.95	J	ng/L		97	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.20	J	ng/L		110	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	118		70 - 130
13C2 PFHxA	117		70 - 130
13C2 PFDA	118		70 - 130
13C3-GenX	118		70 - 130

Lab Sample ID: 380-213692-E-1-A MS
Matrix: Water
Analysis Batch: 227732

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 227532

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.2	59.7		ng/L		119	70 - 130
Perfluorooctanesulfonic acid (PFOS)	2.6		50.2	57.1		ng/L		108	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.2	57.3		ng/L		114	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.2	53.8		ng/L		107	70 - 130

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QC Sample Results

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

Job ID: 380-213713-1
SDG: PFAS: Ka'amilo Wells P1

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

Lab Sample ID: 380-213692-E-1-A MS
Matrix: Water
Analysis Batch: 227732

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 227532

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec		
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.2	54.1		ng/L		108	70 - 130		
Perfluorohexanoic acid (PFHxA)	3.5		50.2	58.9		ng/L		110	70 - 130		
Perfluorododecanoic acid (PFDoA)	<2.0		50.2	58.1		ng/L		116	70 - 130		
Perfluorooctanoic acid (PFOA)	2.1		50.2	60.2		ng/L		116	70 - 130		
Perfluorodecanoic acid (PFDA)	<2.0		50.2	56.7		ng/L		113	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)	2.8		50.2	57.3		ng/L		108	70 - 130		
Perfluorobutanesulfonic acid (PFBS)	<2.0		50.2	55.6		ng/L		108	70 - 130		
Perfluoroheptanoic acid (PFHpA)	<2.0		50.2	56.9		ng/L		111	70 - 130		
Perfluorononanoic acid (PFNA)	<2.0		50.2	56.2		ng/L		112	70 - 130		
Perfluorotetradecanoic acid (PFTA)	<2.0		50.2	60.2		ng/L		120	70 - 130		
Perfluorotridecanoic acid (PFTTrDA)	<2.0	F1	50.2	66.5	F1	ng/L		132	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.2	55.9		ng/L		111	70 - 130		
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.2	54.8		ng/L		109	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.2	58.4		ng/L		116	70 - 130		
MS MS											
Surrogate	%Recovery		Qualifier	Limits							
d5-NEtFOSAA	110			70 - 130							
13C2 PFHxA	115			70 - 130							
13C2 PFDA	126			70 - 130							
13C3-GenX	129			70 - 130							

Lab Sample ID: 380-213692-F-1-A MSD
Matrix: Water
Analysis Batch: 227732

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 227532

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec		RPD	
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit	
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.1	54.3		ng/L		108	70 - 130	9	30	
Perfluorooctanesulfonic acid (PFOS)	2.6		50.1	54.0		ng/L		103	70 - 130	5	30	
Perfluoroundecanoic acid (PFUnA)	<2.0		50.1	53.1		ng/L		106	70 - 130	8	30	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.1	48.6		ng/L		97	70 - 130	10	30	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.1	50.6		ng/L		101	70 - 130	7	30	
Perfluorohexanoic acid (PFHxA)	3.5		50.1	55.5		ng/L		104	70 - 130	6	30	
Perfluorododecanoic acid (PFDoA)	<2.0		50.1	52.7		ng/L		105	70 - 130	10	30	
Perfluorooctanoic acid (PFOA)	2.1		50.1	57.4		ng/L		110	70 - 130	5	30	
Perfluorodecanoic acid (PFDA)	<2.0		50.1	51.5		ng/L		103	70 - 130	10	30	

Eurofins Pomona

QC Association Summary

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

Job ID: 380-213713-1
SDG: PFAS: Ka'amilo Wells P1

LCMS

Prep Batch: 227532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-213713-1	Ka'amilo Wells P1 (331-031-WL008)	Total/NA	Water	537.1 DW	
380-213713-2	FB: Ka'amilo Wells P1 (331-031-WL008)	Total/NA	Water	537.1 DW	
MBL 380-227532/21-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-227532/23-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-227532/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-213692-E-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-213692-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Prep Batch: 227535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-213713-1	Ka'amilo Wells P1 (331-031-WL008)	Total/NA	Water	533	
380-213713-2	FB: Ka'amilo Wells P1 (331-031-WL008)	Total/NA	Water	533	
MBL 380-227535/20-A	Method Blank	Total/NA	Water	533	
LCS 380-227535/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-227535/21-A	Lab Control Sample	Total/NA	Water	533	
380-212993-C-5-A MS	Matrix Spike	Total/NA	Water	533	
380-212993-D-5-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 227730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-213713-1	Ka'amilo Wells P1 (331-031-WL008)	Total/NA	Water	533	227535
380-213713-2	FB: Ka'amilo Wells P1 (331-031-WL008)	Total/NA	Water	533	227535
MBL 380-227535/20-A	Method Blank	Total/NA	Water	533	227535
LCS 380-227535/22-A	Lab Control Sample	Total/NA	Water	533	227535
MRL 380-227535/21-A	Lab Control Sample	Total/NA	Water	533	227535
380-212993-C-5-A MS	Matrix Spike	Total/NA	Water	533	227535
380-212993-D-5-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	227535

Analysis Batch: 227732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-213713-1	Ka'amilo Wells P1 (331-031-WL008)	Total/NA	Water	EPA 537.1 V2	227532
380-213713-2	FB: Ka'amilo Wells P1 (331-031-WL008)	Total/NA	Water	EPA 537.1 V2	227532
MBL 380-227532/21-A	Method Blank	Total/NA	Water	EPA 537.1 V2	227532
LCS 380-227532/23-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	227532
MRL 380-227532/22-A	Lab Control Sample	Total/NA	Water	EPA 537.1 V2	227532
380-213692-E-1-A MS	Matrix Spike	Total/NA	Water	EPA 537.1 V2	227532
380-213692-F-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	EPA 537.1 V2	227532

Lab Chronicle

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

Job ID: 380-213713-1
SDG: PFAS: Ka'amilo Wells P1

Client Sample ID: Ka'amilo Wells P1 (331-031-WL008)

Lab Sample ID: 380-213713-1

Date Collected: 05/11/26 11:48

Matrix: Water

Date Received: 05/13/26 09:28

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			227535	N8NE	EA POM	05/16/26 12:43
Total/NA	Analysis	533		1	227730	SZ9R	EA POM	05/18/26 10:09
Total/NA	Prep	537.1 DW			227532	E9PK	EA POM	05/16/26 11:15
Total/NA	Analysis	EPA 537.1 V2		1	227732	SZ9R	EA POM	05/18/26 09:07

Client Sample ID: FB: Ka'amilo Wells P1 (331-031-WL008)

Lab Sample ID: 380-213713-2

Date Collected: 05/11/26 11:48

Matrix: Water

Date Received: 05/13/26 09:28

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			227535	N8NE	EA POM	05/16/26 12:43
Total/NA	Analysis	533		1	227730	SZ9R	EA POM	05/18/26 10:19
Total/NA	Prep	537.1 DW			227532	E9PK	EA POM	05/16/26 11:15
Total/NA	Analysis	EPA 537.1 V2		1	227732	SZ9R	EA POM	05/18/26 09:16

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: 380-213713-1
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 *

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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: 380-213713-1
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

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Sample Summary

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

Job ID: 380-213713-1
SDG: PFAS: Ka'amilo Wells P1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-213713-1	Ka'amilo Wells P1 (331-031-WL008)	Water	05/11/26 11:48	05/13/26 09:28	HI0000331
380-213713-2	FB: Ka'amilo Wells P1 (331-031-WL008)	Water	05/11/26 11:48	05/13/26 09:28	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



Environment Testing
 America

Client Information		Sampler bailey		Lab PM 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-		Analysis Requested						Job #:			
Address 630 South Beretania Street, Chemistry Lab		Due Date Requested:		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) SUBTRACT - 625 PAH Physis LL (EAL) + TICs 8015B_GRO_LL - (MOD) GRO 8015B_DRO_LL_CS - HNL Ranges. C10-C24/C24-C36/C8-C18 525.2_PREC - (MOD) 525plus PLUS TICs 537_1_DW_PREC - 537.1 Full List 533 - All Analytes						Preservation Codes:			
City Honolulu		TAT Requested (days): RUSH								A - HCL		M - Hexane	
State, Zip: HI, 96843		Compliance Project. <input type="checkbox"/> No								B - NaOH		N - None	
Phone: 808-748-5840 (tel)		PO #: C20525101 exp 05312023								C - Zn Acetate		O - AsNaO2	
Email: kiwamoto@hbws.org		WO #:								D - Nitric Acid		P - Na2O4S	
Project Name RED-HILL/HBWS sites Event Desc. RUSH Weekly Red Hill		Project #: 38001111		E - NaHSO4		Q - Na2SO3							
Site:		SSOW#:		F - MeOH		R - Na2S2O3							
				G - Amchlor		S - H2SO4							
				H - Ascorbic Acid		T - TSP Dodecahydrate							
				I - Ice		U - Acetone							
				J - DI Water		V - MCAA							
				K - EDTA		W - pH 4-5							
				L - EDA		Y - Trizma							
				Other		Z - other (specify)							
Sample Identification		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=volatile, BT=Tissue, A=Al)		Total Number of containers			
						Preservation Code:				Special Instructions/Note:			
Ka'amilo Wells P1 (331-031-WL008)		11-May-2026		1148		G		Water		3 3			
FB: Ka'amilo Wells P1 (331-031-WL008)		11-May-2026		1148				Water		1 1			



380-213713 COC

Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
<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
Deliverable Requested I, II, III, IV, Other (specify)				Archive For _____ Months			
Empty Kit Relinquished by _____ Date _____ Time _____				Special Instructions/QC Requirements			

Relinquished by _____ Date/Time: 12 May 2026		Company: HBWS		Received by: Maria Lopez		Date/Time: 5/13/26		Company: HBWS	
Relinquished by _____ Date/Time:		Company:		Received by:		Date/Time:		Company:	
Relinquished by _____ Date/Time:		Company:		Received by:		Date/Time:		Company:	
Custody Seals Intact <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.		Cooler Temperature(s) °C and Other Remarks: (631A) 2.6 + 0.0 2.6 901 - 110267					



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-213713-1
SDG Number: PFAS: Ka'amilo Wells P1

Login Number: 213713

List Number: 1

Creator: Del Rosario, Michael

List Source: Eurofins Pomona

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

