eurofins | Environment Testing

# ANALYTICAL REPORT

## PREPARED FOR

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

Generated 5/9/2026 8:58:05 PM

## JOB DESCRIPTION

RED-HILL
PFAS: Aiea Gulch Wells Pump 1

## JOB NUMBER

380-210963-1

Eurofins Pomona
941 Corporate Center Drive
Pomona CA 91768-2642

See page two for job notes and contact information.

## 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

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

# Table of Contents

# Definitions/Glossary

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

Job ID: 380-210963-1
SDG: PFAS: Aiea Gulch Wells Pump 1

## Qualifiers

### LCMS

| Qualifier | Qualifier Description |
|---|---|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

## Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|---|---|
| ☼ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

**Job Narrative**
**380-210963-1**

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

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

**Receipt**
The samples were received on 4/29/2026 9:47 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 3.6°C.

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

# Detection Summary

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

Job ID: 380-210963-1
SDG: PFAS: Aiea Gulch Wells Pump 1

## Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)

Lab Sample ID: 380-210963-1

No Detections.

## Client Sample ID: FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)

Lab Sample ID: 380-210963-2

No Detections.

This Detection Summary does not include radiochemical test results.

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

Job ID: 380-210963-1
SDG: PFAS: Aiea Gulch Wells Pump 1

**Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)**
**Date Collected: 04/27/26 11:08**
**Date Received: 04/29/26 09:47**

**Lab Sample ID: 380-210963-1**
**Matrix: Drinking Water**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| Perfluorobutanesulfonic acid (PFBS) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| Perfluorodecanoic acid (PFDA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| Perfluorododecanoic acid (PFDoA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| Perfluoroheptanoic acid (PFHpA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| Perfluorohexanesulfonic acid (PFHxS) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| Perfluorohexanoic acid (PFHxA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| Perfluorononanoic acid (PFNA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| Perfluorooctanesulfonic acid (PFOS) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| Perfluorooctanoic acid (PFOA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| Perfluoroundecanoic acid (PFUnA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| Perfluorobutanoic acid (PFBA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| Perfluoropentanoic acid (PFPeA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| Perfluoroheptanesulfonic acid (PFHpS) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |
| Perfluoropentanesulfonic acid (PFPeS) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 18:54 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C3 HFPO-DA* | *107* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 18:54* | *1* |
| *13C6 PFDA* | *111* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 18:54* | *1* |
| *13C5 PFHxA* | *113* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 18:54* | *1* |
| *13C4 PFHpA* | *111* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 18:54* | *1* |
| *13C8 PFOA* | *112* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 18:54* | *1* |
| *13C9 PFNA* | *114* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 18:54* | *1* |
| *13C7 PFUnA* | *107* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 18:54* | *1* |
| *13C2 PFDoA* | *106* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 18:54* | *1* |
| *13C4 PFBA* | *112* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 18:54* | *1* |
| *13C5 PFPeA* | *111* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 18:54* | *1* |
| *13C3 PFBS* | *109* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 18:54* | *1* |
| *13C3 PFHxS* | *109* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 18:54* | *1* |

## Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)

**Lab Sample ID: 380-210963-1**

**Date Collected: 04/27/26 11:08**
**Date Received: 04/29/26 09:47**

**Matrix: Drinking Water**

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

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C8 PFOS* | *110* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 18:54* | *1* |
| *13C2-4:2-FTS* | *105* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 18:54* | *1* |
| *13C2-6:2-FTS* | *103* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 18:54* | *1* |
| *13C2-8:2-FTS* | *98* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 18:54* | *1* |

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX) | <2.0 | | 2.0 | ng/L | | 05/01/26 09:00 | 05/01/26 18:52 | 1 |
| Perfluorooctanesulfonic acid (PFOS) | <2.0 | | 2.0 | ng/L | | 05/01/26 09:00 | 05/01/26 18:52 | 1 |
| Perfluoroundecanoic acid (PFUnA) | <2.0 | | 2.0 | ng/L | | 05/01/26 09:00 | 05/01/26 18:52 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | <2.0 | | 2.0 | ng/L | | 05/01/26 09:00 | 05/01/26 18:52 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | <2.0 | | 2.0 | ng/L | | 05/01/26 09:00 | 05/01/26 18:52 | 1 |
| Perfluorohexanoic acid (PFHxA) | <2.0 | | 2.0 | ng/L | | 05/01/26 09:00 | 05/01/26 18:52 | 1 |
| Perfluorododecanoic acid (PFDoA) | <2.0 | | 2.0 | ng/L | | 05/01/26 09:00 | 05/01/26 18:52 | 1 |
| Perfluorooctanoic acid (PFOA) | <2.0 | | 2.0 | ng/L | | 05/01/26 09:00 | 05/01/26 18:52 | 1 |
| Perfluorodecanoic acid (PFDA) | <2.0 | | 2.0 | ng/L | | 05/01/26 09:00 | 05/01/26 18:52 | 1 |
| Perfluorohexanesulfonic acid (PFHxS) | <2.0 | | 2.0 | ng/L | | 05/01/26 09:00 | 05/01/26 18:52 | 1 |
| Perfluorobutanesulfonic acid (PFBS) | <2.0 | | 2.0 | ng/L | | 05/01/26 09:00 | 05/01/26 18:52 | 1 |
| Perfluoroheptanoic acid (PFHpA) | <2.0 | | 2.0 | ng/L | | 05/01/26 09:00 | 05/01/26 18:52 | 1 |
| Perfluorononanoic acid (PFNA) | <2.0 | | 2.0 | ng/L | | 05/01/26 09:00 | 05/01/26 18:52 | 1 |
| Perfluorotetradecanoic acid (PFTA) | <2.0 | | 2.0 | ng/L | | 05/01/26 09:00 | 05/01/26 18:52 | 1 |
| Perfluorotridecanoic acid (PFTrDA) | <2.0 | | 2.0 | ng/L | | 05/01/26 09:00 | 05/01/26 18:52 | 1 |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS) | <2.0 | | 2.0 | ng/L | | 05/01/26 09:00 | 05/01/26 18:52 | 1 |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | <2.0 | | 2.0 | ng/L | | 05/01/26 09:00 | 05/01/26 18:52 | 1 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | <2.0 | | 2.0 | ng/L | | 05/01/26 09:00 | 05/01/26 18:52 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *d5-NEtFOSAA* | *108* | | *70 - 130* | *05/01/26 09:00* | *05/01/26 18:52* | *1* |
| *13C2 PFHxA* | *107* | | *70 - 130* | *05/01/26 09:00* | *05/01/26 18:52* | *1* |
| *13C2 PFDA* | *115* | | *70 - 130* | *05/01/26 09:00* | *05/01/26 18:52* | *1* |
| *13C3-GenX* | *101* | | *70 - 130* | *05/01/26 09:00* | *05/01/26 18:52* | *1* |

## Client Sample ID: FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)

**Lab Sample ID: 380-210963-2**

**Date Collected: 04/27/26 11:08**
**Date Received: 04/29/26 09:47**

**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | <2.0 | | 2.0 | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS) | <2.0 | | 2.0 | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | <2.0 | | 2.0 | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |

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

Job ID: 380-210963-1
SDG: PFAS: Aiea Gulch Wells Pump 1

**Client Sample ID: FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)**
**Date Collected: 04/27/26 11:08**
**Date Received: 04/29/26 09:47**

**Lab Sample ID: 380-210963-2**
**Matrix: Water**

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

| Analyte | Result | Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| Perfluorobutanesulfonic acid (PFBS) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| Perfluorodecanoic acid (PFDA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| Perfluorododecanoic acid (PFDoA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| Perfluoroheptanoic acid (PFHpA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| Perfluorohexanesulfonic acid (PFHxS) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| Perfluorohexanoic acid (PFHxA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| Perfluorononanoic acid (PFNA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| Perfluorooctanesulfonic acid (PFOS) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| Perfluorooctanoic acid (PFOA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| Perfluoroundecanoic acid (PFUnA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| Perfluorobutanoic acid (PFBA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| Perfluoropentanoic acid (PFPeA) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| Perfluoroheptanesulfonic acid (PFHpS) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |
| Perfluoropentanesulfonic acid (PFPeS) | <2.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 19:04 | 1 |

| *Isotope Dilution* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C3 HFPO-DA* | *86* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 19:04* | *1* |
| *13C6 PFDA* | *98* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 19:04* | *1* |
| *13C5 PFHxA* | *96* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 19:04* | *1* |
| *13C4 PFHpA* | *97* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 19:04* | *1* |
| *13C8 PFOA* | *102* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 19:04* | *1* |
| *13C9 PFNA* | *99* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 19:04* | *1* |
| *13C7 PFUnA* | *99* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 19:04* | *1* |
| *13C2 PFDoA* | *101* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 19:04* | *1* |
| *13C4 PFBA* | *94* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 19:04* | *1* |
| *13C5 PFPeA* | *96* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 19:04* | *1* |
| *13C3 PFBS* | *104* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 19:04* | *1* |
| *13C3 PFHxS* | *106* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 19:04* | *1* |
| *13C8 PFOS* | *108* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 19:04* | *1* |
| *13C2-4:2-FTS* | *103* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 19:04* | *1* |
| *13C2-6:2-FTS* | *99* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 19:04* | *1* |
| *13C2-8:2-FTS* | *103* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 19:04* | *1* |

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

Job ID: 380-210963-1
SDG: PFAS: Aiea Gulch Wells Pump 1

**Client Sample ID: FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)**
**Date Collected: 04/27/26 11:08**
**Date Received: 04/29/26 09:47**

**Lab Sample ID: 380-210963-2**
**Matrix: Water**

**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 | | 05/01/26 09:00 | 05/01/26 19:01 | 1 |
| Perfluorooctanesulfonic acid (PFOS) | <2.0 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 19:01 | 1 |
| Perfluoroundecanoic acid (PFUnA) | <2.0 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 19:01 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | <2.0 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 19:01 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | <2.0 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 19:01 | 1 |
| Perfluorohexanoic acid (PFHxA) | <2.0 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 19:01 | 1 |
| Perfluorododecanoic acid (PFDoA) | <2.0 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 19:01 | 1 |
| Perfluorooctanoic acid (PFOA) | <2.0 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 19:01 | 1 |
| Perfluorodecanoic acid (PFDA) | <2.0 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 19:01 | 1 |
| Perfluorohexanesulfonic acid (PFHxS) | <2.0 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 19:01 | 1 |
| Perfluorobutanesulfonic acid (PFBS) | <2.0 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 19:01 | 1 |
| Perfluoroheptanoic acid (PFHpA) | <2.0 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 19:01 | 1 |
| Perfluorononanoic acid (PFNA) | <2.0 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 19:01 | 1 |
| Perfluorotetradecanoic acid (PFTA) | <2.0 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 19:01 | 1 |
| Perfluorotridecanoic acid (PFTrDA) | <2.0 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 19:01 | 1 |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS) | <2.0 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 19:01 | 1 |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | <2.0 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 19:01 | 1 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | <2.0 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 19:01 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *d5-NEtFOSAA* | *109* | | *70 - 130* | *05/01/26 09:00* | *05/01/26 19:01* | *1* |
| *13C2 PFHxA* | *106* | | *70 - 130* | *05/01/26 09:00* | *05/01/26 19:01* | *1* |
| *13C2 PFDA* | *113* | | *70 - 130* | *05/01/26 09:00* | *05/01/26 19:01* | *1* |
| *13C3-GenX* | *99* | | *70 - 130* | *05/01/26 09:00* | *05/01/26 19:01* | *1* |

# Action Limit Summary

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

Job ID: 380-210963-1
SDG: PFAS: Aiea Gulch Wells Pump 1

## Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)

## Lab Sample ID: 380-210963-1

### Compliance Check

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

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

## Client Sample ID: FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)

## Lab Sample ID: 380-210963-2

### 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: 380-210963-1
SDG: PFAS: Aiea Gulch Wells Pump 1

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

**Matrix: Drinking Water** — **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | d5NEFOS | PFHxA | PFDA | GenX |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) | (70-130) | (70-130) |
| 380-210963-1 | AIEA GULCH WELLS PUMP 1 (331 | 108 | 107 | 115 | 101 |

**Surrogate Legend**

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

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

**Matrix: Water** — **Prep Type: Total/NA**

| | | Percent Surrogate Recovery (Acceptance Limits) | | | |
|---|---|---|---|---|---|
| | | d5NEFOS | PFHxA | PFDA | GenX |
| Lab Sample ID | Client Sample ID | (70-130) | (70-130) | (70-130) | (70-130) |
| 380-210960-B-1-A MS | Matrix Spike | 107 | 112 | 115 | 112 |
| 380-210960-C-1-A MSD | Matrix Spike Duplicate | 111 | 109 | 115 | 110 |
| 380-210963-2 | FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071) | 109 | 106 | 113 | 99 |
| LCS 380-224319/21-A | Lab Control Sample | 111 | 107 | 115 | 105 |
| MBL 380-224319/19-A | Method Blank | 111 | 102 | 112 | 98 |
| MRL 380-224319/20-A | Lab Control Sample | 107 | 102 | 110 | 96 |

**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: 380-210963-1
SDG: PFAS: Aiea Gulch Wells Pump 1

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

**Matrix: Drinking Water** — **Prep Type: Total/NA**

| | | Percent Isotope Dilution Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | HFPODA | C6PFDA | 13C5PHA | C4PFHA | C8PFOA | C9PFNA | 13C7PUA | PFDoA |
| Lab Sample ID | Client Sample ID | (50-200) | (50-200) | (50-200) | (50-200) | (50-200) | (50-200) | (50-200) | (50-200) |
| 380-210963-1 | AIEA GULCH WELLS PUMP 1 (331 | 107 | 111 | 113 | 111 | 112 | 114 | 107 | 106 |

| | | Percent Isotope Dilution Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | PFBA | PFPeA | C3PFBS | C3PFHS | C8PFOS | 42FTS | 62FTS | 82FTS |
| Lab Sample ID | Client Sample ID | (50-200) | (50-200) | (50-200) | (50-200) | (50-200) | (50-200) | (50-200) | (50-200) |
| 380-210963-1 | AIEA GULCH WELLS PUMP 1 (331 | 112 | 111 | 109 | 109 | 110 | 105 | 103 | 98 |

**Surrogate Legend**

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

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

**Matrix: Water** — **Prep Type: Total/NA**

| | | Percent Isotope Dilution Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | HFPODA | C6PFDA | 13C5PHA | C4PFHA | C8PFOA | C9PFNA | 13C7PUA | PFDoA |
| Lab Sample ID | Client Sample ID | (50-200) | (50-200) | (50-200) | (50-200) | (50-200) | (50-200) | (50-200) | (50-200) |
| 380-210960-E-1-A MS | Matrix Spike | 111 | 109 | 109 | 112 | 114 | 112 | 109 | 111 |
| 380-210960-F-1-A MSD | Matrix Spike Duplicate | 117 | 111 | 110 | 113 | 114 | 114 | 111 | 116 |
| 380-210963-2 | FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071) | 86 | 98 | 96 | 97 | 102 | 99 | 99 | 101 |
| LCS 380-225731/22-A | Lab Control Sample | 116 | 114 | 114 | 115 | 114 | 115 | 113 | 118 |
| MBL 380-225731/20-A | Method Blank | 99 | 99 | 107 | 104 | 105 | 106 | 99 | 102 |
| MRL 380-225731/21-A | Lab Control Sample | 102 | 106 | 113 | 109 | 109 | 109 | 106 | 104 |

| | | Percent Isotope Dilution Recovery (Acceptance Limits) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | PFBA | PFPeA | C3PFBS | C3PFHS | C8PFOS | 42FTS | 62FTS | 82FTS |
| Lab Sample ID | Client Sample ID | (50-200) | (50-200) | (50-200) | (50-200) | (50-200) | (50-200) | (50-200) | (50-200) |
| 380-210960-E-1-A MS | Matrix Spike | 108 | 115 | 110 | 108 | 109 | 99 | 95 | 95 |
| 380-210960-F-1-A MSD | Matrix Spike Duplicate | 113 | 117 | 108 | 110 | 112 | 100 | 97 | 97 |
| 380-210963-2 | FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071) | 94 | 96 | 104 | 106 | 108 | 103 | 99 | 103 |
| LCS 380-225731/22-A | Lab Control Sample | 113 | 115 | 110 | 111 | 112 | 101 | 95 | 94 |
| MBL 380-225731/20-A | Method Blank | 101 | 100 | 101 | 100 | 102 | 97 | 97 | 88 |
| MRL 380-225731/21-A | Lab Control Sample | 104 | 105 | 108 | 112 | 111 | 103 | 98 | 103 |

**Surrogate Legend**

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

# Isotope Dilution Summary

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

Job ID: 380-210963-1
SDG: PFAS: Aiea Gulch Wells Pump 1

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

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

**Lab Sample ID: MBL 380-225731/20-A**
**Matrix: Water**
**Analysis Batch: 225892**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 225731**

| Analyte | MBL Result | MBL Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | <0.30 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS) | <0.30 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | <0.60 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX) | <1.0 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| Perfluorobutanesulfonic acid (PFBS) | <0.37 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| Perfluorodecanoic acid (PFDA) | <0.31 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| Perfluorododecanoic acid (PFDoA) | <0.54 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| Perfluoroheptanoic acid (PFHpA) | <0.39 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| Perfluorohexanesulfonic acid (PFHxS) | <0.32 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| Perfluorohexanoic acid (PFHxA) | <0.46 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| Perfluorononanoic acid (PFNA) | <0.40 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| Perfluorooctanesulfonic acid (PFOS) | <0.43 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| Perfluorooctanoic acid (PFOA) | <0.38 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| Perfluoroundecanoic acid (PFUnA) | <0.42 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| Perfluorobutanoic acid (PFBA) | <0.69 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS) | <0.38 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS) | <0.37 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS) | <0.48 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | <0.47 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA) | <0.25 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | <0.46 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | <0.15 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| Perfluoropentanoic acid (PFPeA) | <0.38 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| Perfluoroheptanesulfonic acid (PFHpS) | <0.36 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| Perfluoropentanesulfonic acid (PFPeS) | <0.39 | | 2.0 | | ng/L | | 05/08/26 06:09 | 05/08/26 16:09 | 1 |

| *Isotope Dilution* | *MBL %Recovery* | *MBL Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C3 HFPO-DA* | *99* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 16:09* | *1* |
| *13C6 PFDA* | *99* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 16:09* | *1* |
| *13C5 PFHxA* | *107* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 16:09* | *1* |
| *13C4 PFHpA* | *104* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 16:09* | *1* |
| *13C8 PFOA* | *105* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 16:09* | *1* |
| *13C9 PFNA* | *106* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 16:09* | *1* |
| *13C7 PFUnA* | *99* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 16:09* | *1* |
| *13C2 PFDoA* | *102* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 16:09* | *1* |
| *13C4 PFBA* | *101* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 16:09* | *1* |
| *13C5 PFPeA* | *100* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 16:09* | *1* |
| *13C3 PFBS* | *101* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 16:09* | *1* |
| *13C3 PFHxS* | *100* | | *50 - 200* | *05/08/26 06:09* | *05/08/26 16:09* | *1* |

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

**Lab Sample ID: MBL 380-225731/20-A**
**Matrix: Water**
**Analysis Batch: 225892**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 225731**

| Isotope Dilution | MBL %Recovery | MBL Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 13C8 PFOS | 102 | | 50 - 200 | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| 13C2-4:2-FTS | 97 | | 50 - 200 | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| 13C2-6:2-FTS | 97 | | 50 - 200 | 05/08/26 06:09 | 05/08/26 16:09 | 1 |
| 13C2-8:2-FTS | 88 | | 50 - 200 | 05/08/26 06:09 | 05/08/26 16:09 | 1 |

**Lab Sample ID: LCS 380-225731/22-A**
**Matrix: Water**
**Analysis Batch: 225892**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 225731**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | 120 | 102 | | ng/L | | 85 | 70 - 130 |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS) | 120 | 101 | | ng/L | | 84 | 70 - 130 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | 120 | 103 | | ng/L | | 86 | 70 - 130 |
| Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX) | 120 | 102 | | ng/L | | 84 | 70 - 130 |
| Perfluorobutanesulfonic acid (PFBS) | 120 | 104 | | ng/L | | 86 | 70 - 130 |
| Perfluorodecanoic acid (PFDA) | 120 | 100 | | ng/L | | 83 | 70 - 130 |
| Perfluorododecanoic acid (PFDoA) | 120 | 103 | | ng/L | | 85 | 70 - 130 |
| Perfluoroheptanoic acid (PFHpA) | 120 | 102 | | ng/L | | 84 | 70 - 130 |
| Perfluorohexanesulfonic acid (PFHxS) | 120 | 104 | | ng/L | | 87 | 70 - 130 |
| Perfluorohexanoic acid (PFHxA) | 120 | 101 | | ng/L | | 84 | 70 - 130 |
| Perfluorononanoic acid (PFNA) | 120 | 101 | | ng/L | | 84 | 70 - 130 |
| Perfluorooctanesulfonic acid (PFOS) | 120 | 101 | | ng/L | | 84 | 70 - 130 |
| Perfluorooctanoic acid (PFOA) | 120 | 104 | | ng/L | | 86 | 70 - 130 |
| Perfluoroundecanoic acid (PFUnA) | 120 | 103 | | ng/L | | 86 | 70 - 130 |
| Perfluorobutanoic acid (PFBA) | 120 | 101 | | ng/L | | 84 | 70 - 130 |
| 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS) | 120 | 105 | | ng/L | | 88 | 70 - 130 |
| 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS) | 120 | 99.0 | | ng/L | | 82 | 70 - 130 |
| 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS) | 120 | 109 | | ng/L | | 90 | 70 - 130 |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | 120 | 106 | | ng/L | | 88 | 70 - 130 |
| Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA) | 120 | 106 | | ng/L | | 88 | 70 - 130 |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | 120 | 98.5 | | ng/L | | 82 | 70 - 130 |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | 120 | 100 | | ng/L | | 83 | 70 - 130 |
| Perfluoropentanoic acid (PFPeA) | 120 | 99.0 | | ng/L | | 82 | 70 - 130 |
| Perfluoroheptanesulfonic acid (PFHpS) | 120 | 103 | | ng/L | | 86 | 70 - 130 |

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

**Lab Sample ID: LCS 380-225731/22-A**
**Matrix: Water**
**Analysis Batch: 225892**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 225731**

| Analyte | | | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluoropentanesulfonic acid (PFPeS) | | | 120 | 105 | | ng/L | | 88 | 70 - 130 | | |

| *Isotope Dilution* | *LCS %Recovery* | *LCS Qualifier* | *Limits* |
|---|---|---|---|
| *13C3 HFPO-DA* | *116* | | *50 - 200* |
| *13C6 PFDA* | *114* | | *50 - 200* |
| *13C5 PFHxA* | *114* | | *50 - 200* |
| *13C4 PFHpA* | *115* | | *50 - 200* |
| *13C8 PFOA* | *114* | | *50 - 200* |
| *13C9 PFNA* | *115* | | *50 - 200* |
| *13C7 PFUnA* | *113* | | *50 - 200* |
| *13C2 PFDoA* | *118* | | *50 - 200* |
| *13C4 PFBA* | *113* | | *50 - 200* |
| *13C5 PFPeA* | *115* | | *50 - 200* |
| *13C3 PFBS* | *110* | | *50 - 200* |
| *13C3 PFHxS* | *111* | | *50 - 200* |
| *13C8 PFOS* | *112* | | *50 - 200* |
| *13C2-4:2-FTS* | *101* | | *50 - 200* |
| *13C2-6:2-FTS* | *95* | | *50 - 200* |
| *13C2-8:2-FTS* | *94* | | *50 - 200* |

**Lab Sample ID: MRL 380-225731/21-A**
**Matrix: Water**
**Analysis Batch: 225892**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 225731**

| Analyte | | | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | | | 2.01 | 1.82 | J | ng/L | | 90 | 50 - 150 | | |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS) | | | 2.01 | 1.75 | J | ng/L | | 87 | 50 - 150 | | |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | | | 2.01 | 1.87 | J | ng/L | | 93 | 50 - 150 | | |
| Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX) | | | 2.01 | 1.88 | J | ng/L | | 94 | 50 - 150 | | |
| Perfluorobutanesulfonic acid (PFBS) | | | 2.01 | 1.92 | J | ng/L | | 96 | 50 - 150 | | |
| Perfluorodecanoic acid (PFDA) | | | 2.01 | 1.94 | J | ng/L | | 97 | 50 - 150 | | |
| Perfluorododecanoic acid (PFDoA) | | | 2.01 | 1.99 | J | ng/L | | 99 | 50 - 150 | | |
| Perfluoroheptanoic acid (PFHpA) | | | 2.01 | 1.95 | J | ng/L | | 97 | 50 - 150 | | |
| Perfluorohexanesulfonic acid (PFHxS) | | | 2.01 | 1.84 | J | ng/L | | 92 | 50 - 150 | | |
| Perfluorohexanoic acid (PFHxA) | | | 2.01 | 1.91 | J | ng/L | | 95 | 50 - 150 | | |
| Perfluorononanoic acid (PFNA) | | | 2.01 | 1.89 | J | ng/L | | 94 | 50 - 150 | | |
| Perfluorooctanesulfonic acid (PFOS) | | | 2.01 | 1.82 | J | ng/L | | 90 | 50 - 150 | | |
| Perfluorooctanoic acid (PFOA) | | | 2.01 | 1.91 | J | ng/L | | 95 | 50 - 150 | | |
| Perfluoroundecanoic acid (PFUnA) | | | 2.01 | 1.77 | J | ng/L | | 88 | 50 - 150 | | |
| Perfluorobutanoic acid (PFBA) | | | 2.01 | 1.95 | J | ng/L | | 97 | 50 - 150 | | |

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

**Lab Sample ID: MRL 380-225731/21-A**
**Matrix: Water**
**Analysis Batch: 225892**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 225731**

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS) | 2.01 | 1.89 | J | ng/L | | 94 | 50 - 150 |
| 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS) | 2.01 | 2.06 | J | ng/L | | 103 | 50 - 150 |
| 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS) | 2.01 | 2.13 | J | ng/L | | 106 | 50 - 150 |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | 2.01 | 1.69 | J | ng/L | | 84 | 50 - 150 |
| Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA) | 2.01 | 1.77 | J | ng/L | | 88 | 50 - 150 |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | 2.01 | 1.95 | J | ng/L | | 97 | 50 - 150 |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | 2.01 | 1.88 | J | ng/L | | 94 | 50 - 150 |
| Perfluoropentanoic acid (PFPeA) | 2.01 | 2.04 | J | ng/L | | 102 | 50 - 150 |
| Perfluoroheptanesulfonic acid (PFHpS) | 2.01 | 1.86 | J | ng/L | | 92 | 50 - 150 |
| Perfluoropentanesulfonic acid (PFPeS) | 2.01 | 1.82 | J | ng/L | | 90 | 50 - 150 |

| *Isotope Dilution* | *MRL %Recovery* | *MRL Qualifier* | *Limits* |
|---|---|---|---|
| *13C3 HFPO-DA* | *102* | | *50 - 200* |
| *13C6 PFDA* | *106* | | *50 - 200* |
| *13C5 PFHxA* | *113* | | *50 - 200* |
| *13C4 PFHpA* | *109* | | *50 - 200* |
| *13C8 PFOA* | *109* | | *50 - 200* |
| *13C9 PFNA* | *109* | | *50 - 200* |
| *13C7 PFUnA* | *106* | | *50 - 200* |
| *13C2 PFDoA* | *104* | | *50 - 200* |
| *13C4 PFBA* | *104* | | *50 - 200* |
| *13C5 PFPeA* | *105* | | *50 - 200* |
| *13C3 PFBS* | *108* | | *50 - 200* |
| *13C3 PFHxS* | *112* | | *50 - 200* |
| *13C8 PFOS* | *111* | | *50 - 200* |
| *13C2-4:2-FTS* | *103* | | *50 - 200* |
| *13C2-6:2-FTS* | *98* | | *50 - 200* |
| *13C2-8:2-FTS* | *103* | | *50 - 200* |

**Lab Sample ID: 380-210960-E-1-A MS**
**Matrix: Water**
**Analysis Batch: 225892**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 225731**

| 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 | 103 | | ng/L | | 86 | 70 - 130 |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS) | <2.0 | | 120 | 105 | | ng/L | | 87 | 70 - 130 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | <2.0 | | 120 | 105 | | ng/L | | 87 | 70 - 130 |

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

**Lab Sample ID: 380-210960-E-1-A MS**
**Matrix: Water**
**Analysis Batch: 225892**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 225731**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX) | <2.0 | | 120 | 105 | | ng/L | | 87 | 70 - 130 |
| Perfluorobutanesulfonic acid (PFBS) | 2.2 | | 120 | 106 | | ng/L | | 86 | 70 - 130 |
| Perfluorodecanoic acid (PFDA) | <2.0 | | 120 | 107 | | ng/L | | 89 | 70 - 130 |
| Perfluorododecanoic acid (PFDoA) | <2.0 | | 120 | 108 | | ng/L | | 90 | 70 - 130 |
| Perfluoroheptanoic acid (PFHpA) | <2.0 | | 120 | 108 | | ng/L | | 88 | 70 - 130 |
| Perfluorohexanesulfonic acid (PFHxS) | <2.0 | | 120 | 106 | | ng/L | | 87 | 70 - 130 |
| Perfluorohexanoic acid (PFHxA) | 3.1 | | 120 | 106 | | ng/L | | 85 | 70 - 130 |
| Perfluorononanoic acid (PFNA) | <2.0 | | 120 | 106 | | ng/L | | 88 | 70 - 130 |
| Perfluorooctanesulfonic acid (PFOS) | 2.5 | | 120 | 108 | | ng/L | | 88 | 70 - 130 |
| Perfluorooctanoic acid (PFOA) | 2.7 | | 120 | 103 | | ng/L | | 84 | 70 - 130 |
| Perfluoroundecanoic acid (PFUnA) | <2.0 | | 120 | 102 | | ng/L | | 85 | 70 - 130 |
| Perfluorobutanoic acid (PFBA) | <2.0 | | 120 | 106 | | ng/L | | 87 | 70 - 130 |
| 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS) | <2.0 | | 120 | 110 | | ng/L | | 91 | 70 - 130 |
| 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS) | <2.0 | | 120 | 102 | | ng/L | | 84 | 70 - 130 |
| 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS) | <2.0 | | 120 | 112 | | ng/L | | 93 | 70 - 130 |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | <2.0 | | 120 | 106 | | ng/L | | 88 | 70 - 130 |
| Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA) | <2.0 | | 120 | 105 | | ng/L | | 87 | 70 - 130 |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | <2.0 | | 120 | 107 | | ng/L | | 88 | 70 - 130 |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | <2.0 | | 120 | 102 | | ng/L | | 85 | 70 - 130 |
| Perfluoropentanoic acid (PFPeA) | 3.2 | | 120 | 104 | | ng/L | | 83 | 70 - 130 |
| Perfluoroheptanesulfonic acid (PFHpS) | <2.0 | | 120 | 108 | | ng/L | | 89 | 70 - 130 |
| Perfluoropentanesulfonic acid (PFPeS) | <2.0 | | 120 | 104 | | ng/L | | 87 | 70 - 130 |

| *Isotope Dilution* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *13C3 HFPO-DA* | *111* | | *50 - 200* |
| *13C6 PFDA* | *109* | | *50 - 200* |
| *13C5 PFHxA* | *109* | | *50 - 200* |
| *13C4 PFHpA* | *112* | | *50 - 200* |
| *13C8 PFOA* | *114* | | *50 - 200* |
| *13C9 PFNA* | *112* | | *50 - 200* |
| *13C7 PFUnA* | *109* | | *50 - 200* |
| *13C2 PFDoA* | *111* | | *50 - 200* |
| *13C4 PFBA* | *108* | | *50 - 200* |
| *13C5 PFPeA* | *115* | | *50 - 200* |
| *13C3 PFBS* | *110* | | *50 - 200* |
| *13C3 PFHxS* | *108* | | *50 - 200* |
| *13C8 PFOS* | *109* | | *50 - 200* |

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

**Lab Sample ID: 380-210960-E-1-A MS**
**Matrix: Water**
**Analysis Batch: 225892**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 225731**

| Isotope Dilution | MS %Recovery | MS Qualifier | Limits |
|---|---|---|---|
| 13C2-4:2-FTS | 99 | | 50 - 200 |
| 13C2-6:2-FTS | 95 | | 50 - 200 |
| 13C2-8:2-FTS | 95 | | 50 - 200 |

**Lab Sample ID: 380-210960-F-1-A MSD**
**Matrix: Water**
**Analysis Batch: 225892**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 225731**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | <2.0 | | 120 | 104 | | ng/L | | 87 | 70 - 130 | 1 | 30 |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS) | <2.0 | | 120 | 104 | | ng/L | | 86 | 70 - 130 | 1 | 30 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | <2.0 | | 120 | 107 | | ng/L | | 89 | 70 - 130 | 1 | 30 |
| Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX) | <2.0 | | 120 | 107 | | ng/L | | 89 | 70 - 130 | 2 | 30 |
| Perfluorobutanesulfonic acid (PFBS) | 2.2 | | 120 | 111 | | ng/L | | 90 | 70 - 130 | 5 | 30 |
| Perfluorodecanoic acid (PFDA) | <2.0 | | 120 | 107 | | ng/L | | 89 | 70 - 130 | 1 | 30 |
| Perfluorododecanoic acid (PFDoA) | <2.0 | | 120 | 108 | | ng/L | | 90 | 70 - 130 | 0 | 30 |
| Perfluoroheptanoic acid (PFHpA) | <2.0 | | 120 | 111 | | ng/L | | 91 | 70 - 130 | 3 | 30 |
| Perfluorohexanesulfonic acid (PFHxS) | <2.0 | | 120 | 107 | | ng/L | | 88 | 70 - 130 | 0 | 30 |
| Perfluorohexanoic acid (PFHxA) | 3.1 | | 120 | 109 | | ng/L | | 88 | 70 - 130 | 3 | 30 |
| Perfluorononanoic acid (PFNA) | <2.0 | | 120 | 107 | | ng/L | | 89 | 70 - 130 | 1 | 30 |
| Perfluorooctanesulfonic acid (PFOS) | 2.5 | | 120 | 109 | | ng/L | | 88 | 70 - 130 | 1 | 30 |
| Perfluorooctanoic acid (PFOA) | 2.7 | | 120 | 107 | | ng/L | | 87 | 70 - 130 | 4 | 30 |
| Perfluoroundecanoic acid (PFUnA) | <2.0 | | 120 | 107 | | ng/L | | 89 | 70 - 130 | 5 | 30 |
| Perfluorobutanoic acid (PFBA) | <2.0 | | 120 | 108 | | ng/L | | 88 | 70 - 130 | 2 | 30 |
| 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS) | <2.0 | | 120 | 112 | | ng/L | | 93 | 70 - 130 | 2 | 30 |
| 1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS) | <2.0 | | 120 | 107 | | ng/L | | 89 | 70 - 130 | 6 | 30 |
| 1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS) | <2.0 | | 120 | 109 | | ng/L | | 91 | 70 - 130 | 2 | 30 |
| Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) | <2.0 | | 120 | 119 | | ng/L | | 99 | 70 - 130 | 12 | 30 |
| Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA) | <2.0 | | 120 | 114 | | ng/L | | 95 | 70 - 130 | 8 | 30 |
| Perfluoro-3-methoxypropanoic acid (PFMPA) | <2.0 | | 120 | 108 | | ng/L | | 90 | 70 - 130 | 2 | 30 |
| Perfluoro-4-methoxybutanoic acid (PFMBA) | <2.0 | | 120 | 106 | | ng/L | | 88 | 70 - 130 | 3 | 30 |
| Perfluoropentanoic acid (PFPeA) | 3.2 | | 120 | 105 | | ng/L | | 84 | 70 - 130 | 1 | 30 |
| Perfluoroheptanesulfonic acid (PFHpS) | <2.0 | | 120 | 108 | | ng/L | | 90 | 70 - 130 | 1 | 30 |
| Perfluoropentanesulfonic acid (PFPeS) | <2.0 | | 120 | 103 | | ng/L | | 85 | 70 - 130 | 1 | 30 |

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

| Isotope Dilution | MSD %Recovery | MSD Qualifier | Limits |
|---|---|---|---|
| 13C3 HFPO-DA | 117 | | 50 - 200 |
| 13C6 PFDA | 111 | | 50 - 200 |
| 13C5 PFHxA | 110 | | 50 - 200 |
| 13C4 PFHpA | 113 | | 50 - 200 |
| 13C8 PFOA | 114 | | 50 - 200 |
| 13C9 PFNA | 114 | | 50 - 200 |
| 13C7 PFUnA | 111 | | 50 - 200 |
| 13C2 PFDoA | 116 | | 50 - 200 |
| 13C4 PFBA | 113 | | 50 - 200 |
| 13C5 PFPeA | 117 | | 50 - 200 |
| 13C3 PFBS | 108 | | 50 - 200 |
| 13C3 PFHxS | 110 | | 50 - 200 |
| 13C8 PFOS | 112 | | 50 - 200 |
| 13C2-4:2-FTS | 100 | | 50 - 200 |
| 13C2-6:2-FTS | 97 | | 50 - 200 |
| 13C2-8:2-FTS | 97 | | 50 - 200 |

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

**Lab Sample ID: MBL 380-224319/19-A**
**Matrix: Water**
**Analysis Batch: 224453**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 224319**

| Analyte | MBL Result | MBL Qualifier | RL | | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX) | <1.0 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 17:42 | 1 |
| Perfluorooctanesulfonic acid (PFOS) | <0.43 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 17:42 | 1 |
| Perfluoroundecanoic acid (PFUnA) | <0.42 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 17:42 | 1 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | <0.58 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 17:42 | 1 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | <0.42 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 17:42 | 1 |
| Perfluorohexanoic acid (PFHxA) | <0.46 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 17:42 | 1 |
| Perfluorododecanoic acid (PFDoA) | <0.54 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 17:42 | 1 |
| Perfluorooctanoic acid (PFOA) | <0.38 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 17:42 | 1 |
| Perfluorodecanoic acid (PFDA) | <0.31 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 17:42 | 1 |
| Perfluorohexanesulfonic acid (PFHxS) | <0.32 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 17:42 | 1 |
| Perfluorobutanesulfonic acid (PFBS) | <0.37 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 17:42 | 1 |
| Perfluoroheptanoic acid (PFHpA) | <0.39 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 17:42 | 1 |
| Perfluorononanoic acid (PFNA) | <0.40 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 17:42 | 1 |
| Perfluorotetradecanoic acid (PFTA) | <0.54 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 17:42 | 1 |
| Perfluorotridecanoic acid (PFTrDA) | <0.36 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 17:42 | 1 |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS) | <0.30 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 17:42 | 1 |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | <0.30 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 17:42 | 1 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | <0.60 | | 2.0 | | ng/L | | 05/01/26 09:00 | 05/01/26 17:42 | 1 |

| Surrogate | MBL %Recovery | MBL Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| d5-NEtFOSAA | 111 | | 70 - 130 | 05/01/26 09:00 | 05/01/26 17:42 | 1 |
| 13C2 PFHxA | 102 | | 70 - 130 | 05/01/26 09:00 | 05/01/26 17:42 | 1 |
| 13C2 PFDA | 112 | | 70 - 130 | 05/01/26 09:00 | 05/01/26 17:42 | 1 |

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

**Lab Sample ID: MBL 380-224319/19-A**
**Matrix: Water**
**Analysis Batch: 224453**

**Client Sample ID: Method Blank**
**Prep Type: Total/NA**
**Prep Batch: 224319**

| Surrogate | MBL %Recovery | MBL Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|
| 13C3-GenX | 98 | | 70 - 130 | 05/01/26 09:00 | 05/01/26 17:42 | 1 |

**Lab Sample ID: LCS 380-224319/21-A**
**Matrix: Water**
**Analysis Batch: 224453**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 224319**

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX) | 50.1 | 47.1 | | ng/L | | 94 | 70 - 130 |
| Perfluorooctanesulfonic acid (PFOS) | 50.1 | 51.1 | | ng/L | | 102 | 70 - 130 |
| Perfluoroundecanoic acid (PFUnA) | 50.1 | 51.2 | | ng/L | | 102 | 70 - 130 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 50.1 | 49.4 | | ng/L | | 99 | 70 - 130 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 50.1 | 49.6 | | ng/L | | 99 | 70 - 130 |
| Perfluorohexanoic acid (PFHxA) | 50.1 | 49.4 | | ng/L | | 99 | 70 - 130 |
| Perfluorododecanoic acid (PFDoA) | 50.1 | 49.7 | | ng/L | | 99 | 70 - 130 |
| Perfluorooctanoic acid (PFOA) | 50.1 | 48.2 | | ng/L | | 96 | 70 - 130 |
| Perfluorodecanoic acid (PFDA) | 50.1 | 51.6 | | ng/L | | 103 | 70 - 130 |
| Perfluorohexanesulfonic acid (PFHxS) | 50.1 | 48.9 | | ng/L | | 98 | 70 - 130 |
| Perfluorobutanesulfonic acid (PFBS) | 50.1 | 50.4 | | ng/L | | 101 | 70 - 130 |
| Perfluoroheptanoic acid (PFHpA) | 50.1 | 48.4 | | ng/L | | 97 | 70 - 130 |
| Perfluorononanoic acid (PFNA) | 50.1 | 51.7 | | ng/L | | 103 | 70 - 130 |
| Perfluorotetradecanoic acid (PFTA) | 50.1 | 41.2 | | ng/L | | 82 | 70 - 130 |
| Perfluorotridecanoic acid (PFTrDA) | 50.1 | 50.5 | | ng/L | | 101 | 70 - 130 |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS) | 50.1 | 50.7 | | ng/L | | 101 | 70 - 130 |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | 50.1 | 50.7 | | ng/L | | 101 | 70 - 130 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | 50.1 | 49.2 | | ng/L | | 98 | 70 - 130 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---|---|---|---|
| d5-NEtFOSAA | 111 | | 70 - 130 |
| 13C2 PFHxA | 107 | | 70 - 130 |
| 13C2 PFDA | 115 | | 70 - 130 |
| 13C3-GenX | 105 | | 70 - 130 |

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

**Lab Sample ID: MRL 380-224319/20-A**
**Matrix: Water**
**Analysis Batch: 224453**

**Client Sample ID: Lab Control Sample**
**Prep Type: Total/NA**
**Prep Batch: 224319**

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|
| Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX) | 2.00 | 1.80 | J | ng/L | | 90 | 50 - 150 |
| Perfluorooctanesulfonic acid (PFOS) | 2.00 | 2.08 | J | ng/L | | 104 | 50 - 150 |
| Perfluoroundecanoic acid (PFUnA) | 2.00 | 2.19 | J | ng/L | | 109 | 50 - 150 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | 2.00 | 2.02 | J | ng/L | | 101 | 50 - 150 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | 2.00 | 2.03 | J | ng/L | | 102 | 50 - 150 |
| Perfluorohexanoic acid (PFHxA) | 2.00 | 1.95 | J | ng/L | | 97 | 50 - 150 |
| Perfluorododecanoic acid (PFDoA) | 2.00 | 2.03 | J | ng/L | | 102 | 50 - 150 |
| Perfluorooctanoic acid (PFOA) | 2.00 | 1.99 | J | ng/L | | 99 | 50 - 150 |
| Perfluorodecanoic acid (PFDA) | 2.00 | 1.97 | J | ng/L | | 98 | 50 - 150 |
| Perfluorohexanesulfonic acid (PFHxS) | 2.00 | 2.17 | J | ng/L | | 108 | 50 - 150 |
| Perfluorobutanesulfonic acid (PFBS) | 2.00 | 2.04 | J | ng/L | | 102 | 50 - 150 |
| Perfluoroheptanoic acid (PFHpA) | 2.00 | 2.02 | J | ng/L | | 101 | 50 - 150 |
| Perfluorononanoic acid (PFNA) | 2.00 | 2.11 | J | ng/L | | 106 | 50 - 150 |
| Perfluorotetradecanoic acid (PFTA) | 2.00 | 1.86 | J | ng/L | | 93 | 50 - 150 |
| Perfluorotridecanoic acid (PFTrDA) | 2.00 | 2.10 | J | ng/L | | 105 | 50 - 150 |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS) | 2.00 | 2.07 | J | ng/L | | 103 | 50 - 150 |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | 2.00 | 2.03 | J | ng/L | | 101 | 50 - 150 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | 2.00 | 2.01 | J | ng/L | | 100 | 50 - 150 |

| *Surrogate* | *MRL %Recovery* | *MRL Qualifier* | *Limits* |
|---|---|---|---|
| *d5-NEtFOSAA* | *107* | | *70 - 130* |
| *13C2 PFHxA* | *102* | | *70 - 130* |
| *13C2 PFDA* | *110* | | *70 - 130* |
| *13C3-GenX* | *96* | | *70 - 130* |

**Lab Sample ID: 380-210960-B-1-A MS**
**Matrix: Water**
**Analysis Batch: 224453**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 224319**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX) | <2.0 | | 50.2 | 50.6 | | ng/L | | 101 | 70 - 130 |
| Perfluorooctanesulfonic acid (PFOS) | 2.6 | | 50.2 | 53.4 | | ng/L | | 101 | 70 - 130 |
| Perfluoroundecanoic acid (PFUnA) | <2.0 | | 50.2 | 53.5 | | ng/L | | 107 | 70 - 130 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | <2.0 | | 50.2 | 49.7 | | ng/L | | 99 | 70 - 130 |

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

**Lab Sample ID: 380-210960-B-1-A MS**
**Matrix: Water**
**Analysis Batch: 224453**

**Client Sample ID: Matrix Spike**
**Prep Type: Total/NA**
**Prep Batch: 224319**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---|---|---|---|---|---|---|---|---|---|
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | <2.0 | | 50.2 | 50.6 | | ng/L | | 101 | 70 - 130 |
| Perfluorohexanoic acid (PFHxA) | 3.2 | | 50.2 | 53.8 | | ng/L | | 101 | 70 - 130 |
| Perfluorododecanoic acid (PFDoA) | <2.0 | | 50.2 | 50.6 | | ng/L | | 101 | 70 - 130 |
| Perfluorooctanoic acid (PFOA) | 2.9 | | 50.2 | 55.1 | | ng/L | | 104 | 70 - 130 |
| Perfluorodecanoic acid (PFDA) | <2.0 | | 50.2 | 52.6 | | ng/L | | 105 | 70 - 130 |
| Perfluorohexanesulfonic acid (PFHxS) | <2.0 | | 50.2 | 52.5 | | ng/L | | 101 | 70 - 130 |
| Perfluorobutanesulfonic acid (PFBS) | 2.4 | | 50.2 | 53.9 | | ng/L | | 103 | 70 - 130 |
| Perfluoroheptanoic acid (PFHpA) | <2.0 | | 50.2 | 50.3 | | ng/L | | 97 | 70 - 130 |
| Perfluorononanoic acid (PFNA) | <2.0 | | 50.2 | 53.2 | | ng/L | | 106 | 70 - 130 |
| Perfluorotetradecanoic acid (PFTA) | <2.0 | | 50.2 | 42.8 | | ng/L | | 85 | 70 - 130 |
| Perfluorotridecanoic acid (PFTrDA) | <2.0 | | 50.2 | 52.4 | | ng/L | | 104 | 70 - 130 |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS) | <2.0 | | 50.2 | 51.2 | | ng/L | | 102 | 70 - 130 |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | <2.0 | | 50.2 | 50.7 | | ng/L | | 101 | 70 - 130 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | <2.0 | | 50.2 | 52.4 | | ng/L | | 104 | 70 - 130 |

| *Surrogate* | *MS %Recovery* | *MS Qualifier* | *Limits* |
|---|---|---|---|
| *d5-NEtFOSAA* | *107* | | *70 - 130* |
| *13C2 PFHxA* | *112* | | *70 - 130* |
| *13C2 PFDA* | *115* | | *70 - 130* |
| *13C3-GenX* | *112* | | *70 - 130* |

**Lab Sample ID: 380-210960-C-1-A MSD**
**Matrix: Water**
**Analysis Batch: 224453**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 224319**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX) | <2.0 | | 50.3 | 48.9 | | ng/L | | 97 | 70 - 130 | 3 | 30 |
| Perfluorooctanesulfonic acid (PFOS) | 2.6 | | 50.3 | 52.9 | | ng/L | | 100 | 70 - 130 | 1 | 30 |
| Perfluoroundecanoic acid (PFUnA) | <2.0 | | 50.3 | 51.2 | | ng/L | | 102 | 70 - 130 | 4 | 30 |
| N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA) | <2.0 | | 50.3 | 50.5 | | ng/L | | 100 | 70 - 130 | 2 | 30 |
| N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) | <2.0 | | 50.3 | 50.9 | | ng/L | | 101 | 70 - 130 | 0 | 30 |
| Perfluorohexanoic acid (PFHxA) | 3.2 | | 50.3 | 53.1 | | ng/L | | 99 | 70 - 130 | 1 | 30 |
| Perfluorododecanoic acid (PFDoA) | <2.0 | | 50.3 | 50.1 | | ng/L | | 100 | 70 - 130 | 1 | 30 |
| Perfluorooctanoic acid (PFOA) | 2.9 | | 50.3 | 53.9 | | ng/L | | 101 | 70 - 130 | 2 | 30 |
| Perfluorodecanoic acid (PFDA) | <2.0 | | 50.3 | 51.3 | | ng/L | | 102 | 70 - 130 | 2 | 30 |

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

**Lab Sample ID: 380-210960-C-1-A MSD**
**Matrix: Water**
**Analysis Batch: 224453**

**Client Sample ID: Matrix Spike Duplicate**
**Prep Type: Total/NA**
**Prep Batch: 224319**

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perfluorohexanesulfonic acid (PFHxS) | <2.0 | | 50.3 | 51.2 | | ng/L | | 98 | 70 - 130 | 3 | 30 |
| Perfluorobutanesulfonic acid (PFBS) | 2.4 | | 50.3 | 54.2 | | ng/L | | 103 | 70 - 130 | 0 | 30 |
| Perfluoroheptanoic acid (PFHpA) | <2.0 | | 50.3 | 48.9 | | ng/L | | 94 | 70 - 130 | 3 | 30 |
| Perfluorononanoic acid (PFNA) | <2.0 | | 50.3 | 51.6 | | ng/L | | 103 | 70 - 130 | 3 | 30 |
| Perfluorotetradecanoic acid (PFTA) | <2.0 | | 50.3 | 44.8 | | ng/L | | 89 | 70 - 130 | 5 | 30 |
| Perfluorotridecanoic acid (PFTrDA) | <2.0 | | 50.3 | 52.0 | | ng/L | | 103 | 70 - 130 | 1 | 30 |
| 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS) | <2.0 | | 50.3 | 51.7 | | ng/L | | 103 | 70 - 130 | 1 | 30 |
| 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) | <2.0 | | 50.3 | 50.7 | | ng/L | | 101 | 70 - 130 | 0 | 30 |
| 4,8-Dioxa-3H-perfluorononanoic acid (ADONA) | <2.0 | | 50.3 | 51.8 | | ng/L | | 103 | 70 - 130 | 1 | 30 |

| *Surrogate* | *MSD %Recovery* | *MSD Qualifier* | *Limits* |
|---|---|---|---|
| *d5-NEtFOSAA* | *111* | | *70 - 130* |
| *13C2 PFHxA* | *109* | | *70 - 130* |
| *13C2 PFDA* | *115* | | *70 - 130* |
| *13C3-GenX* | *110* | | *70 - 130* |

## LCMS

### Prep Batch: 224319

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 380-210963-1 | AIEA GULCH WELLS PUMP 1 (331-201-TP071) | Total/NA | Drinking Water | 537.1 DW | |
| 380-210963-2 | FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071) | Total/NA | Water | 537.1 DW | |
| MBL 380-224319/19-A | Method Blank | Total/NA | Water | 537.1 DW | |
| LCS 380-224319/21-A | Lab Control Sample | Total/NA | Water | 537.1 DW | |
| MRL 380-224319/20-A | Lab Control Sample | Total/NA | Water | 537.1 DW | |
| 380-210960-B-1-A MS | Matrix Spike | Total/NA | Water | 537.1 DW | |
| 380-210960-C-1-A MSD | Matrix Spike Duplicate | Total/NA | Water | 537.1 DW | |

### Analysis Batch: 224453

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 380-210963-1 | AIEA GULCH WELLS PUMP 1 (331-201-TP071) | Total/NA | Drinking Water | EPA 537.1 V2 | 224319 |
| 380-210963-2 | FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071) | Total/NA | Water | EPA 537.1 V2 | 224319 |
| MBL 380-224319/19-A | Method Blank | Total/NA | Water | EPA 537.1 V2 | 224319 |
| LCS 380-224319/21-A | Lab Control Sample | Total/NA | Water | EPA 537.1 V2 | 224319 |
| MRL 380-224319/20-A | Lab Control Sample | Total/NA | Water | EPA 537.1 V2 | 224319 |
| 380-210960-B-1-A MS | Matrix Spike | Total/NA | Water | EPA 537.1 V2 | 224319 |
| 380-210960-C-1-A MSD | Matrix Spike Duplicate | Total/NA | Water | EPA 537.1 V2 | 224319 |

### Prep Batch: 225731

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 380-210963-1 | AIEA GULCH WELLS PUMP 1 (331-201-TP071) | Total/NA | Drinking Water | 533 | |
| 380-210963-2 | FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071) | Total/NA | Water | 533 | |
| MBL 380-225731/20-A | Method Blank | Total/NA | Water | 533 | |
| LCS 380-225731/22-A | Lab Control Sample | Total/NA | Water | 533 | |
| MRL 380-225731/21-A | Lab Control Sample | Total/NA | Water | 533 | |
| 380-210960-E-1-A MS | Matrix Spike | Total/NA | Water | 533 | |
| 380-210960-F-1-A MSD | Matrix Spike Duplicate | Total/NA | Water | 533 | |

### Analysis Batch: 225892

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---|---|---|---|---|---|
| 380-210963-1 | AIEA GULCH WELLS PUMP 1 (331-201-TP071) | Total/NA | Drinking Water | 533 | 225731 |
| 380-210963-2 | FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071) | Total/NA | Water | 533 | 225731 |
| MBL 380-225731/20-A | Method Blank | Total/NA | Water | 533 | 225731 |
| LCS 380-225731/22-A | Lab Control Sample | Total/NA | Water | 533 | 225731 |
| MRL 380-225731/21-A | Lab Control Sample | Total/NA | Water | 533 | 225731 |
| 380-210960-E-1-A MS | Matrix Spike | Total/NA | Water | 533 | 225731 |
| 380-210960-F-1-A MSD | Matrix Spike Duplicate | Total/NA | Water | 533 | 225731 |

# Lab Chronicle

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

Job ID: 380-210963-1
SDG: PFAS: Aiea Gulch Wells Pump 1

## Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)

**Lab Sample ID: 380-210963-1**

**Date Collected: 04/27/26 11:08**
**Date Received: 04/29/26 09:47**

**Matrix: Drinking Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 533 | | | 225731 | XTD8 | EA POM | 05/08/26 06:09 |
| Total/NA | Analysis | 533 | | 1 | 225892 | Y5FM | EA POM | 05/08/26 18:54 |
| Total/NA | Prep | 537.1 DW | | | 224319 | L9UA | EA POM | 05/01/26 09:00 |
| Total/NA | Analysis | EPA 537.1 V2 | | 1 | 224453 | Y5FM | EA POM | 05/01/26 18:52 |

## Client Sample ID: FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071)

**Lab Sample ID: 380-210963-2**

**Date Collected: 04/27/26 11:08**
**Date Received: 04/29/26 09:47**

**Matrix: Water**

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|---|---|---|---|---|---|---|---|---|
| Total/NA | Prep | 533 | | | 225731 | XTD8 | EA POM | 05/08/26 06:09 |
| Total/NA | Analysis | 533 | | 1 | 225892 | Y5FM | EA POM | 05/08/26 19:04 |
| Total/NA | Prep | 537.1 DW | | | 224319 | L9UA | EA POM | 05/01/26 09:00 |
| Total/NA | Analysis | EPA 537.1 V2 | | 1 | 224453 | Y5FM | EA POM | 05/01/26 19:01 |

**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: 380-210963-1
SDG: PFAS: Aiea Gulch Wells Pump 1

## Laboratory: Eurofins Pomona

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

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

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

# Method Summary

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

Job ID: 380-210963-1
SDG: PFAS: Aiea Gulch Wells Pump 1

| Method | Method Description | Protocol | Laboratory |
|---|---|---|---|
| 533 | Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water | EPA | EA POM |
| EPA 537.1 V2 | EPA 537.1 Ver. 2.0 March 2020 | EPA | EA POM |
| 533 | Extraction of Perfluorinated and Polyfluorinated Alkyl Acids | EPA | EA POM |
| 537.1 DW | Extraction of Perfluorinated Alkyl Acids | EPA | EA POM |

**Protocol References:**

EPA = US Environmental Protection Agency

**Laboratory References:**

EA POM = Eurofins Pomona, 941 Corporate Center Drive, Pomona, CA 91768-2642, TEL (626)386-1100

# Sample Summary

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

Job ID: 380-210963-1
SDG: PFAS: Aiea Gulch Wells Pump 1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Sample Origin |
|---|---|---|---|---|---|
| 380-210963-1 | AIEA GULCH WELLS PUMP 1 (331-201-TP071) | Drinking Water | 04/27/26 11:08 | 04/29/26 09:47 | Hawaii |
| 380-210963-2 | FB: AIEA GULCH WELLS PUMP 1 (331-201-TP071) | Water | 04/27/26 11:08 | 04/29/26 09:47 | Hawaii |

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

# Chain of Custody Record

eurofins | Environment Testing Ame...

380-210963 COC

| 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.eurofinsus.com | State of Origin: | Page: Page 1 of 1 |
| Company: City & County of Honolulu | PWSID: | | | Job #: |

| | |
|---|---|
| Address: 630 South Beretania Street; Chemistry Lab | Due Date Requested: |
| City: Honolulu | TAT Requested (days): |
| State, Zip: HI, 96843 | Compliance Project: Δ No |
| Phone: 808-748-5840 (tel) | PO #: C20525101 exp 05312023 |
| Email: kiwamoto@hbws.org | WO #: |
| Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill | Project #: 38001111 |
| Site: | SSOW#: |

**Analysis Requested**

**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
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Y - Trizma
Z - other (specify)
Other

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs | 8015B_GRO_LL - (MOD) GRO | 8015B_DRO_LL_C8 - HNL Ranges C10-C24/C24-C36/C8-C18 | 625.2_PREC - (MOD) 525plus PLUS TICs | 537.1_DW_PREC - 537.1 Full List | 533 - All Analytes | Total Number of containers | Special Instructions/Note: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | R | A | Q | QA | Y | I | | |
| Aiea Gulch Wells Pump 1 (331-201-TP071) | 27-Apr-2026 | 1108 | G | Water | | | | | | | 3 | 3 | | chlorinated |
| FB: Aiea Gulch Wells Pump 1 (331-201-TP071) | 27-Apr-2026 | 1108 | | | | | | | | | 1 | 1 | | |

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: FEDEX 6711 6573 3016 |
|---|---|---|---|
| [redacted] | Date/Time: 28 APR 2026 1400 | Company: HBWS | Received by: [signature] |
| | Date/Time: | Company: | Received by: |
| Relinquished by: | Date/Time: | Company: | Received by: |

| Date/Time: 4/29/26 947 | Company: FEAC |
|---|---|
| Date/Time: | Company: |
| Date/Time: | Company: |

| Custody Seals Intact: Δ Yes Δ No | Custody Seal No. | Cooler Temperature(s) °C and Other Remarks: 6.1A 3.4 4.2 2.6 .901 Freon |
|---|---|---|

Ver: 01/16/2019

Page 31 of 32

5/9/2026

# Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-210963-1
SDG Number: PFAS: Aiea Gulch Wells Pump 1

**Login Number: 210963**
**List Number: 1**
**Creator: Tran, Kristine**

**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 | |
| ClO4 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 | |