eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

RED-HILL
RUSH Weekly Red Hill

JOB NUMBER

380-69290-1

Eurofins Eaton Analytical Pomona
941 Corporate Center Drive
Pomona CA 91768-2642

See page two for job notes and contact information.

Job Notes

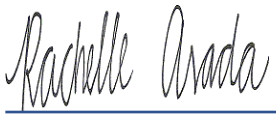
This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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 Eaton Analytical, LLC Project Manager.

Compliance Statement

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

Authorization



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Definitions/Glossary

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

Job ID: 380-69290-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased
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.

GC/MS Semi VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	Presumptive evidence of material.
T	Result is a tentatively identified compound (TIC) and an estimated value.

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 ID: 380-69290-1

Laboratory: Eurofins Eaton Analytical Pomona

Narrative

Job Narrative
380-69290-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

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

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

Receipt
The samples were received on 11/1/2023 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.2°C, 1.5°C and 2.4°C

Receipt Exceptions
EPA 537.1 and EPA 533 are two distinct methods for the analysis of PFAS in drinking water. The analyses are conducted on differing instrumentation, with calibrations, extraction solvents and sample preservatives being dissimilar among the two methods. Therefore it is probable and not unexpected to see the methods having slight variations in analytical results.

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

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: 380-69290-1

Client Sample ID: MOANALUA WELLS
PWSID Number: HI0000331

Lab Sample ID: 380-69290-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.0		2.0		ng/L	1		533	Total/NA

Client Sample ID: AIEA GULCH WELLS PUMP 2
PWSID Number: HI0000331

Lab Sample ID: 380-69290-2

No Detections.

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
PWSID Number: HI0000331

Lab Sample ID: 380-69290-3

No Detections.

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
PWSID Number: HI0000331

Lab Sample ID: 380-69290-4

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	2.4		2.0		ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	2.3		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.5		2.0		ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	2.4		2.0		ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	2.4		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.1		2.0		ng/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	2.3		2.0		ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.3		2.0		ng/L	1		537.1	Total/NA

Client Sample ID: FB MOANALUA WELLS

Lab Sample ID: 380-69290-9

No Detections.

Client Sample ID: FB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-69290-10

No Detections.

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-69290-11

No Detections.

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-69290-12

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical Pomona

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

Job ID: 380-69290-1

Client Sample ID: MOANALUA WELLS
Date Collected: 10/30/23 09:56
Date Received: 11/01/23 10:30

Lab Sample ID: 380-69290-1
Matrix: Drinking Water
PWSID Number: HI0000331

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
2,4'-DDD	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
2,4'-DDE	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
2,4'-DDT	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
2,4-Dinitrotoluene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
2,6-Dinitrotoluene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
2-Methylnaphthalene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
4,4'-DDD	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
4,4'-DDE	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
4,4'-DDT	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Acenaphthene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Acenaphthylene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Acetochlor	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Alachlor	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 16:26	1
alpha-BHC	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
alpha-Chlordane	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 16:26	1
Anthracene	<0.020		0.020		ug/L		11/03/23 14:36	11/05/23 16:26	1
Atrazine	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 16:26	1
Benz(a)anthracene	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 16:26	1
Benzo[a]pyrene	<0.020		0.020		ug/L		11/03/23 14:36	11/05/23 16:26	1
Benzo[b]fluoranthene	<0.020		0.020		ug/L		11/03/23 14:36	11/05/23 16:26	1
Benzo[g,h,i]perylene	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 16:26	1
Benzo[k]fluoranthene	<0.020		0.020		ug/L		11/03/23 14:36	11/05/23 16:26	1
beta-BHC	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Bis(2-ethylhexyl) phthalate	<0.60		0.60		ug/L		11/03/23 14:36	11/05/23 16:26	1
Bromacil	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Butachlor	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 16:26	1
Butylbenzylphthalate	<0.50		0.50		ug/L		11/03/23 14:36	11/05/23 16:26	1
Chlorobenzilate	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Chloroneb	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Chlorothalonil (Draconil, Bravo)	<0.099	^3+	0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Chlorpyrifos	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 16:26	1
Chrysene	<0.020		0.020		ug/L		11/03/23 14:36	11/05/23 16:26	1
delta-BHC	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Di(2-ethylhexyl)adipate	<0.60		0.60		ug/L		11/03/23 14:36	11/05/23 16:26	1
Dibenz(a,h)anthracene	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 16:26	1
Diclorvos (DDVP)	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 16:26	1
Dieldrin	<0.20		0.20		ug/L		11/03/23 14:36	11/05/23 16:26	1
Diethylphthalate	<0.50		0.50		ug/L		11/03/23 14:36	11/05/23 16:26	1
Dimethylphthalate	<0.50		0.50		ug/L		11/03/23 14:36	11/05/23 16:26	1
Di-n-butyl phthalate	<0.99		0.99		ug/L		11/03/23 14:36	11/05/23 16:26	1
Di-n-octyl phthalate	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Endosulfan I (Alpha)	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Endosulfan II (Beta)	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Endosulfan sulfate	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Endrin	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Endrin aldehyde	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
EPTC	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Fluoranthene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1

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

Job ID: 380-69290-1

Client Sample ID: MOANALUA WELLS
Date Collected: 10/30/23 09:56
Date Received: 11/01/23 10:30

Lab Sample ID: 380-69290-1
Matrix: Drinking Water
PWSID Number: HI0000331

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 16:26	1
gamma-Chlordane	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 16:26	1
Heptachlor	<0.040		0.040		ug/L		11/03/23 14:36	11/05/23 16:26	1
Heptachlor epoxide (isomer B)	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 16:26	1
Hexachlorobenzene	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 16:26	1
Hexachlorocyclopentadiene	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 16:26	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 16:26	1
Isophorone	<0.50		0.50		ug/L		11/03/23 14:36	11/05/23 16:26	1
Lindane	<0.040		0.040		ug/L		11/03/23 14:36	11/05/23 16:26	1
Malathion	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Methoxychlor	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Metolachlor	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 16:26	1
Molinate	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Naphthalene	<0.30		0.30		ug/L		11/03/23 14:36	11/05/23 16:26	1
Parathion	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Pendimethalin (Penoxaline)	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Phenanthrene	<0.040		0.040		ug/L		11/03/23 14:36	11/05/23 16:26	1
Propachlor	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 16:26	1
Pyrene	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 16:26	1
Simazine	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 16:26	1
Terbacil	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Terbuthylazine	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1
Thiobencarb	<0.20		0.20		ug/L		11/03/23 14:36	11/05/23 16:26	1
Total Permethrin (mixed isomers)	<0.20		0.20		ug/L		11/03/23 14:36	11/05/23 16:26	1
trans-Nonachlor	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 16:26	1
Trifluralin	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:26	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*0.53*	*T J*	*ug/L*		*8.44*	*N/A*	*11/03/23 14:36*	*11/05/23 16:26*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*97*		*70 - 130*	*11/03/23 14:36*	*11/05/23 16:26*	*1*
Perylene-d12	*98*		*70 - 130*	*11/03/23 14:36*	*11/05/23 16:26*	*1*
Triphenylphosphate	*116*		*70 - 130*	*11/03/23 14:36*	*11/05/23 16:26*	*1*

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		11/15/23 15:09	11/17/23 17:03	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1

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

Job ID: 380-69290-1

Client Sample ID: MOANALUA WELLS

Date Collected: 10/30/23 09:56
Date Received: 11/01/23 10:30

Lab Sample ID: 380-69290-1

Matrix: Drinking Water
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
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
Perfluorobutanoic acid (PFBA)	**2.0**		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:03	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*94*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:03*	*1*
13C6 PFDA	*99*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:03*	*1*
13C5 PFHxA	*101*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:03*	*1*
13C4 PFHpA	*93*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:03*	*1*
13C8 PFOA	*100*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:03*	*1*
13C9 PFNA	*104*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:03*	*1*
13C7 PFUnA	*95*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:03*	*1*
13C2 PFDoA	*98*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:03*	*1*
13C4 PFBA	*104*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:03*	*1*
13C5 PFPeA	*115*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:03*	*1*
13C3 PFBS	*95*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:03*	*1*
13C3 PFHxS	*99*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:03*	*1*
13C8 PFOS	*102*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:03*	*1*
13C2-4:2-FTS	*113*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:03*	*1*
13C2-6:2-FTS	*105*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:03*	*1*
13C2-8:2-FTS	*104*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:03*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 13:53	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 13:53	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 13:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 13:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 13:53	1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-69290-1

Date Collected: 10/30/23 09:56

Matrix: Drinking Water

Date Received: 11/01/23 10:30

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 13:53	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 13:53	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 13:53	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 13:53	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 13:53	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 13:53	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 13:53	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 13:53	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 13:53	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 13:53	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 13:53	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 13:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 13:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*98*		*70 - 130*	*11/09/23 10:46*	*11/13/23 13:53*	*1*
13C2 PFHxA	*110*		*70 - 130*	*11/09/23 10:46*	*11/13/23 13:53*	*1*
13C2 PFDA	*109*		*70 - 130*	*11/09/23 10:46*	*11/13/23 13:53*	*1*
13C3-GenX	*101*		*70 - 130*	*11/09/23 10:46*	*11/13/23 13:53*	*1*

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-69290-2

Date Collected: 10/30/23 11:09

Matrix: Drinking Water

Date Received: 11/01/23 10:30

PWSID Number: HI0000331

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
2,4'-DDD	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
2,4'-DDE	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
2,4'-DDT	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
2,4-Dinitrotoluene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
2,6-Dinitrotoluene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
2-Methylnaphthalene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
4,4'-DDD	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
4,4'-DDE	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
4,4'-DDT	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Acenaphthene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Acenaphthylene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Acetochlor	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Alachlor	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 16:46	1
alpha-BHC	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
alpha-Chlordane	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 16:46	1
Anthracene	<0.020		0.020		ug/L		11/03/23 14:36	11/05/23 16:46	1
Atrazine	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 16:46	1
Benz(a)anthracene	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 16:46	1
Benzo[a]pyrene	<0.020		0.020		ug/L		11/03/23 14:36	11/05/23 16:46	1
Benzo[b]fluoranthene	<0.020		0.020		ug/L		11/03/23 14:36	11/05/23 16:46	1
Benzo[g,h,i]perylene	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 16:46	1

Client Sample ID: AIEA GULCH WELLS PUMP 2
Date Collected: 10/30/23 11:09
Date Received: 11/01/23 10:30

Lab Sample ID: 380-69290-2
Matrix: Drinking Water
PWSID Number: HI0000331

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	<0.020		0.020		ug/L		11/03/23 14:36	11/05/23 16:46	1
beta-BHC	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59		ug/L		11/03/23 14:36	11/05/23 16:46	1
Bromacil	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Butachlor	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 16:46	1
Butylbenzylphthalate	<0.49		0.49		ug/L		11/03/23 14:36	11/05/23 16:46	1
Chlorobenzilate	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Chloroneb	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Chlorothalonil (Draconil, Bravo)	<0.099	^3+	0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Chlorpyrifos	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 16:46	1
Chrysene	<0.020		0.020		ug/L		11/03/23 14:36	11/05/23 16:46	1
delta-BHC	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Di(2-ethylhexyl)adipate	<0.59		0.59		ug/L		11/03/23 14:36	11/05/23 16:46	1
Dibenz(a,h)anthracene	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 16:46	1
Diclorvos (DDVP)	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 16:46	1
Dieldrin	<0.20		0.20		ug/L		11/03/23 14:36	11/05/23 16:46	1
Diethylphthalate	<0.49		0.49		ug/L		11/03/23 14:36	11/05/23 16:46	1
Dimethylphthalate	<0.49		0.49		ug/L		11/03/23 14:36	11/05/23 16:46	1
Di-n-butyl phthalate	<0.99		0.99		ug/L		11/03/23 14:36	11/05/23 16:46	1
Di-n-octyl phthalate	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Endosulfan I (Alpha)	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Endosulfan II (Beta)	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Endosulfan sulfate	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Endrin	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Endrin aldehyde	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
EPTC	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Fluoranthene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Fluorene	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 16:46	1
gamma-Chlordane	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 16:46	1
Heptachlor	<0.039		0.039		ug/L		11/03/23 14:36	11/05/23 16:46	1
Heptachlor epoxide (isomer B)	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 16:46	1
Hexachlorobenzene	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 16:46	1
Hexachlorocyclopentadiene	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 16:46	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 16:46	1
Isophorone	<0.49		0.49		ug/L		11/03/23 14:36	11/05/23 16:46	1
Lindane	<0.039		0.039		ug/L		11/03/23 14:36	11/05/23 16:46	1
Malathion	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Methoxychlor	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Metolachlor	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 16:46	1
Molinate	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Naphthalene	<0.30		0.30		ug/L		11/03/23 14:36	11/05/23 16:46	1
Parathion	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Pendimethalin (Penoxaline)	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Phenanthrene	<0.039		0.039		ug/L		11/03/23 14:36	11/05/23 16:46	1
Propachlor	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 16:46	1
Pyrene	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 16:46	1
Simazine	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 16:46	1
Terbacil	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1
Terbuthylazine	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Date Collected: 10/30/23 11:09
Date Received: 11/01/23 10:30

Lab Sample ID: 380-69290-2

Matrix: Drinking Water
PWSID Number: HI0000331

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Thiobencarb	<0.20		0.20		ug/L		11/03/23 14:36	11/05/23 16:46	1
Total Permethrin (mixed isomers)	<0.20		0.20		ug/L		11/03/23 14:36	11/05/23 16:46	1
trans-Nonachlor	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 16:46	1
Trifluralin	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 16:46	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*			*N/A*	*11/03/23 14:36*	*11/05/23 16:46*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*96*		*70 - 130*	*11/03/23 14:36*	*11/05/23 16:46*	*1*
Perylene-d12	*103*		*70 - 130*	*11/03/23 14:36*	*11/05/23 16:46*	*1*
Triphenylphosphate	*114*		*70 - 130*	*11/03/23 14:36*	*11/05/23 16:46*	*1*

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		11/15/23 15:09	11/17/23 17:13	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:13	1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Date Collected: 10/30/23 11:09
Date Received: 11/01/23 10:30

Lab Sample ID: 380-69290-2

Matrix: Drinking Water
PWSID Number: HI0000331

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	87		50 - 200	11/15/23 15:09	11/17/23 17:13	1
13C6 PFDA	94		50 - 200	11/15/23 15:09	11/17/23 17:13	1
13C5 PFHxA	95		50 - 200	11/15/23 15:09	11/17/23 17:13	1
13C4 PFHpA	95		50 - 200	11/15/23 15:09	11/17/23 17:13	1
13C8 PFOA	90		50 - 200	11/15/23 15:09	11/17/23 17:13	1
13C9 PFNA	101		50 - 200	11/15/23 15:09	11/17/23 17:13	1
13C7 PFUnA	95		50 - 200	11/15/23 15:09	11/17/23 17:13	1
13C2 PFDoA	100		50 - 200	11/15/23 15:09	11/17/23 17:13	1
13C4 PFBA	96		50 - 200	11/15/23 15:09	11/17/23 17:13	1
13C5 PFPeA	101		50 - 200	11/15/23 15:09	11/17/23 17:13	1
13C3 PFBS	96		50 - 200	11/15/23 15:09	11/17/23 17:13	1
13C3 PFHxS	100		50 - 200	11/15/23 15:09	11/17/23 17:13	1
13C8 PFOS	103		50 - 200	11/15/23 15:09	11/17/23 17:13	1
13C2-4:2-FTS	110		50 - 200	11/15/23 15:09	11/17/23 17:13	1
13C2-6:2-FTS	101		50 - 200	11/15/23 15:09	11/17/23 17:13	1
13C2-8:2-FTS	114		50 - 200	11/15/23 15:09	11/17/23 17:13	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:21	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:21	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:21	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:21	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:21	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:21	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:21	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:21	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:21	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:21	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:21	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:21	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:21	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:21	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:21	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:21	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	110		70 - 130	11/09/23 10:46	11/13/23 14:21	1
13C2 PFHxA	104		70 - 130	11/09/23 10:46	11/13/23 14:21	1
13C2 PFDA	112		70 - 130	11/09/23 10:46	11/13/23 14:21	1
13C3-GenX	105		70 - 130	11/09/23 10:46	11/13/23 14:21	1

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

Job ID: 380-69290-1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
Date Collected: 10/30/23 11:44
Date Received: 11/01/23 10:30

Lab Sample ID: 380-69290-3
Matrix: Drinking Water
PWSID Number: HI0000331

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
2,4'-DDD	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
2,4'-DDE	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
2,4'-DDT	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
2,4-Dinitrotoluene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
2,6-Dinitrotoluene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
2-Methylnaphthalene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
4,4'-DDD	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
4,4'-DDE	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
4,4'-DDT	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Acenaphthene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Acenaphthylene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Acetochlor	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Alachlor	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 17:06	1
alpha-BHC	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
alpha-Chlordane	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 17:06	1
Anthracene	<0.020		0.020		ug/L		11/03/23 14:36	11/05/23 17:06	1
Atrazine	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 17:06	1
Benz(a)anthracene	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 17:06	1
Benzo[a]pyrene	<0.020		0.020		ug/L		11/03/23 14:36	11/05/23 17:06	1
Benzo[b]fluoranthene	<0.020		0.020		ug/L		11/03/23 14:36	11/05/23 17:06	1
Benzo[g,h,i]perylene	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 17:06	1
Benzo[k]fluoranthene	<0.020		0.020		ug/L		11/03/23 14:36	11/05/23 17:06	1
beta-BHC	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59		ug/L		11/03/23 14:36	11/05/23 17:06	1
Bromacil	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Butachlor	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 17:06	1
Butylbenzylphthalate	<0.49		0.49		ug/L		11/03/23 14:36	11/05/23 17:06	1
Chlorobenzilate	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Chloroneb	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Chlorothalonil (Draconil, Bravo)	<0.099	^3+	0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Chlorpyrifos	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 17:06	1
Chrysene	<0.020		0.020		ug/L		11/03/23 14:36	11/05/23 17:06	1
delta-BHC	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Di(2-ethylhexyl)adipate	<0.59		0.59		ug/L		11/03/23 14:36	11/05/23 17:06	1
Dibenz(a,h)anthracene	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 17:06	1
Diclorvos (DDVP)	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 17:06	1
Dieldrin	<0.20		0.20		ug/L		11/03/23 14:36	11/05/23 17:06	1
Diethylphthalate	<0.49		0.49		ug/L		11/03/23 14:36	11/05/23 17:06	1
Dimethylphthalate	<0.49		0.49		ug/L		11/03/23 14:36	11/05/23 17:06	1
Di-n-butyl phthalate	<0.99		0.99		ug/L		11/03/23 14:36	11/05/23 17:06	1
Di-n-octyl phthalate	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Endosulfan I (Alpha)	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Endosulfan II (Beta)	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Endosulfan sulfate	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Endrin	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Endrin aldehyde	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
EPTC	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Fluoranthene	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
Date Collected: 10/30/23 11:44
Date Received: 11/01/23 10:30

Lab Sample ID: 380-69290-3
Matrix: Drinking Water
PWSID Number: HI0000331

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 17:06	1
gamma-Chlordane	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 17:06	1
Heptachlor	<0.039		0.039		ug/L		11/03/23 14:36	11/05/23 17:06	1
Heptachlor epoxide (isomer B)	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 17:06	1
Hexachlorobenzene	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 17:06	1
Hexachlorocyclopentadiene	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 17:06	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 17:06	1
Isophorone	<0.49		0.49		ug/L		11/03/23 14:36	11/05/23 17:06	1
Lindane	<0.039		0.039		ug/L		11/03/23 14:36	11/05/23 17:06	1
Malathion	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Methoxychlor	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Metolachlor	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 17:06	1
Molinate	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Naphthalene	<0.30		0.30		ug/L		11/03/23 14:36	11/05/23 17:06	1
Parathion	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Pendimethalin (Penoxaline)	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Phenanthrene	<0.039		0.039		ug/L		11/03/23 14:36	11/05/23 17:06	1
Propachlor	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 17:06	1
Pyrene	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 17:06	1
Simazine	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 17:06	1
Terbacil	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Terbuthylazine	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1
Thiobencarb	<0.20		0.20		ug/L		11/03/23 14:36	11/05/23 17:06	1
Total Permethrin (mixed isomers)	<0.20		0.20		ug/L		11/03/23 14:36	11/05/23 17:06	1
trans-Nonachlor	<0.049		0.049		ug/L		11/03/23 14:36	11/05/23 17:06	1
Trifluralin	<0.099		0.099		ug/L		11/03/23 14:36	11/05/23 17:06	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*			*N/A*	*11/03/23 14:36*	*11/05/23 17:06*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*96*		*70 - 130*	*11/03/23 14:36*	*11/05/23 17:06*	*1*
Perylene-d12	*101*		*70 - 130*	*11/03/23 14:36*	*11/05/23 17:06*	*1*
Triphenylphosphate	*115*		*70 - 130*	*11/03/23 14:36*	*11/05/23 17:06*	*1*

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		11/15/23 15:09	11/17/23 17:23	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
Date Collected: 10/30/23 11:44
Date Received: 11/01/23 10:30

Lab Sample ID: 380-69290-3
Matrix: Drinking Water
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
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:23	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*85*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:23*	*1*
13C6 PFDA	*101*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:23*	*1*
13C5 PFHxA	*93*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:23*	*1*
13C4 PFHpA	*95*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:23*	*1*
13C8 PFOA	*96*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:23*	*1*
13C9 PFNA	*106*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:23*	*1*
13C7 PFUnA	*95*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:23*	*1*
13C2 PFDoA	*103*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:23*	*1*
13C4 PFBA	*98*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:23*	*1*
13C5 PFPeA	*102*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:23*	*1*
13C3 PFBS	*93*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:23*	*1*
13C3 PFHxS	*97*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:23*	*1*
13C8 PFOS	*105*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:23*	*1*
13C2-4:2-FTS	*111*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:23*	*1*
13C2-6:2-FTS	*104*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:23*	*1*
13C2-8:2-FTS	*120*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:23*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:30	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:30	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:30	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:30	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:30	1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-69290-3

Date Collected: 10/30/23 11:44
Matrix: Drinking Water
Date Received: 11/01/23 10:30
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:30	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:30	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:30	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:30	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:30	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:30	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:30	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:30	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:30	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:30	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:30	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*106*		*70 - 130*	*11/09/23 10:46*	*11/13/23 14:30*	*1*
13C2 PFHxA	*102*		*70 - 130*	*11/09/23 10:46*	*11/13/23 14:30*	*1*
13C2 PFDA	*102*		*70 - 130*	*11/09/23 10:46*	*11/13/23 14:30*	*1*
13C3-GenX	*101*		*70 - 130*	*11/09/23 10:46*	*11/13/23 14:30*	*1*

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-69290-4

Date Collected: 10/30/23 10:37
Matrix: Drinking Water
Date Received: 11/01/23 10:30
PWSID Number: HI0000331

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
2,4'-DDD	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
2,4'-DDE	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
2,4'-DDT	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
2,4-Dinitrotoluene	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
2,6-Dinitrotoluene	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
2-Methylnaphthalene	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
4,4'-DDD	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
4,4'-DDE	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
4,4'-DDT	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Acenaphthene	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Acenaphthylene	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Acetochlor	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Alachlor	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 17:25	1
alpha-BHC	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
alpha-Chlordane	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 17:25	1
Anthracene	<0.020		0.020		ug/L		11/03/23 14:36	11/05/23 17:25	1
Atrazine	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 17:25	1
Benz(a)anthracene	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 17:25	1
Benzo[a]pyrene	<0.020		0.020		ug/L		11/03/23 14:36	11/05/23 17:25	1
Benzo[b]fluoranthene	<0.020		0.020		ug/L		11/03/23 14:36	11/05/23 17:25	1
Benzo[g,h,i]perylene	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 17:25	1

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

Job ID: 380-69290-1

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
Date Collected: 10/30/23 10:37
Date Received: 11/01/23 10:30

Lab Sample ID: 380-69290-4
Matrix: Drinking Water
PWSID Number: HI0000331

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	<0.020		0.020		ug/L		11/03/23 14:36	11/05/23 17:25	1
beta-BHC	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Bis(2-ethylhexyl) phthalate	<0.60		0.60		ug/L		11/03/23 14:36	11/05/23 17:25	1
Bromacil	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Butachlor	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 17:25	1
Butylbenzylphthalate	<0.50		0.50		ug/L		11/03/23 14:36	11/05/23 17:25	1
Chlorobenzilate	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Chloroneb	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Chlorothalonil (Draconil, Bravo)	<0.10	^3+	0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Chlorpyrifos	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 17:25	1
Chrysene	<0.020		0.020		ug/L		11/03/23 14:36	11/05/23 17:25	1
delta-BHC	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Di(2-ethylhexyl)adipate	<0.60		0.60		ug/L		11/03/23 14:36	11/05/23 17:25	1
Dibenz(a,h)anthracene	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 17:25	1
Diclorvos (DDVP)	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 17:25	1
Dieldrin	<0.20		0.20		ug/L		11/03/23 14:36	11/05/23 17:25	1
Diethylphthalate	<0.50		0.50		ug/L		11/03/23 14:36	11/05/23 17:25	1
Dimethylphthalate	<0.50		0.50		ug/L		11/03/23 14:36	11/05/23 17:25	1
Di-n-butyl phthalate	<1.0		1.0		ug/L		11/03/23 14:36	11/05/23 17:25	1
Di-n-octyl phthalate	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Endosulfan I (Alpha)	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Endosulfan II (Beta)	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Endosulfan sulfate	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Endrin	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Endrin aldehyde	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
EPTC	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Fluoranthene	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Fluorene	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 17:25	1
gamma-Chlordane	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 17:25	1
Heptachlor	<0.040		0.040		ug/L		11/03/23 14:36	11/05/23 17:25	1
Heptachlor epoxide (isomer B)	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 17:25	1
Hexachlorobenzene	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 17:25	1
Hexachlorocyclopentadiene	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 17:25	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 17:25	1
Isophorone	<0.50		0.50		ug/L		11/03/23 14:36	11/05/23 17:25	1
Lindane	<0.040		0.040		ug/L		11/03/23 14:36	11/05/23 17:25	1
Malathion	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Methoxychlor	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Metolachlor	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 17:25	1
Molinate	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Naphthalene	<0.30		0.30		ug/L		11/03/23 14:36	11/05/23 17:25	1
Parathion	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Pendimethalin (Penoxaline)	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Phenanthrene	<0.040		0.040		ug/L		11/03/23 14:36	11/05/23 17:25	1
Propachlor	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 17:25	1
Pyrene	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 17:25	1
Simazine	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 17:25	1
Terbacil	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1
Terbuthylazine	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
Date Collected: 10/30/23 10:37
Date Received: 11/01/23 10:30

Lab Sample ID: 380-69290-4
Matrix: Drinking Water
PWSID Number: HI0000331

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Thiobencarb	<0.20		0.20		ug/L		11/03/23 14:36	11/05/23 17:25	1
Total Permethrin (mixed isomers)	<0.20		0.20		ug/L		11/03/23 14:36	11/05/23 17:25	1
trans-Nonachlor	<0.050		0.050		ug/L		11/03/23 14:36	11/05/23 17:25	1
Trifluralin	<0.10		0.10		ug/L		11/03/23 14:36	11/05/23 17:25	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*0.53*	*T J*	*ug/L*		*8.04*	*N/A*	*11/03/23 14:36*	*11/05/23 17:25*	*1*
Unknown	*0.59*	*T J*	*ug/L*		*8.65*	*N/A*	*11/03/23 14:36*	*11/05/23 17:25*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*97*		*70 - 130*	*11/03/23 14:36*	*11/05/23 17:25*	*1*
Perylene-d12	*103*		*70 - 130*	*11/03/23 14:36*	*11/05/23 17:25*	*1*
Triphenylphosphate	*114*		*70 - 130*	*11/03/23 14:36*	*11/05/23 17:25*	*1*

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		11/15/23 15:09	11/17/23 15:00	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
Perfluorohexanesulfonic acid (PFHxS)	**2.4**		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
Perfluorohexanoic acid (PFHxA)	**2.3**		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
Perfluorooctanesulfonic acid (PFOS)	**2.5**		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
Perfluorooctanoic acid (PFOA)	**2.4**		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
Perfluoropentanoic acid (PFPeA)	**2.4**		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
Date Collected: 10/30/23 10:37
Date Received: 11/01/23 10:30

Lab Sample ID: 380-69290-4
Matrix: Drinking Water
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
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 15:00	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*94*		*50 - 200*	*11/15/23 15:09*	*11/17/23 15:00*	*1*
13C6 PFDA	*104*		*50 - 200*	*11/15/23 15:09*	*11/17/23 15:00*	*1*
13C5 PFHxA	*95*		*50 - 200*	*11/15/23 15:09*	*11/17/23 15:00*	*1*
13C4 PFHpA	*101*		*50 - 200*	*11/15/23 15:09*	*11/17/23 15:00*	*1*
13C8 PFOA	*102*		*50 - 200*	*11/15/23 15:09*	*11/17/23 15:00*	*1*
13C9 PFNA	*110*		*50 - 200*	*11/15/23 15:09*	*11/17/23 15:00*	*1*
13C7 PFUnA	*97*		*50 - 200*	*11/15/23 15:09*	*11/17/23 15:00*	*1*
13C2 PFDoA	*103*		*50 - 200*	*11/15/23 15:09*	*11/17/23 15:00*	*1*
13C4 PFBA	*101*		*50 - 200*	*11/15/23 15:09*	*11/17/23 15:00*	*1*
13C5 PFPeA	*119*		*50 - 200*	*11/15/23 15:09*	*11/17/23 15:00*	*1*
13C3 PFBS	*102*		*50 - 200*	*11/15/23 15:09*	*11/17/23 15:00*	*1*
13C3 PFHxS	*107*		*50 - 200*	*11/15/23 15:09*	*11/17/23 15:00*	*1*
13C8 PFOS	*108*		*50 - 200*	*11/15/23 15:09*	*11/17/23 15:00*	*1*
13C2-4:2-FTS	*118*		*50 - 200*	*11/15/23 15:09*	*11/17/23 15:00*	*1*
13C2-6:2-FTS	*112*		*50 - 200*	*11/15/23 15:09*	*11/17/23 15:00*	*1*
13C2-8:2-FTS	*121*		*50 - 200*	*11/15/23 15:09*	*11/17/23 15:00*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:40	1
Perfluorooctanesulfonic acid (PFOS)	**2.1**		2.0		ng/L		11/09/23 10:46	11/13/23 14:40	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:40	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:40	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:40	1
Perfluorohexanoic acid (PFHxA)	**2.3**		2.0		ng/L		11/09/23 10:46	11/13/23 14:40	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:40	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:40	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:40	1
Perfluorohexanesulfonic acid (PFHxS)	**2.3**		2.0		ng/L		11/09/23 10:46	11/13/23 14:40	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:40	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:40	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:40	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:40	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:40	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:40	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*99*		*70 - 130*	*11/09/23 10:46*	*11/13/23 14:40*	*1*
13C2 PFHxA	*118*		*70 - 130*	*11/09/23 10:46*	*11/13/23 14:40*	*1*

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-69290-4
Date Collected: 10/30/23 10:37
Matrix: Drinking Water
Date Received: 11/01/23 10:30
PWSID Number: HI0000331

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	112		70 - 130	11/09/23 10:46	11/13/23 14:40	1
13C3-GenX	108		70 - 130	11/09/23 10:46	11/13/23 14:40	1

Client Sample ID: FB MOANALUA WELLS

Lab Sample ID: 380-69290-9
Date Collected: 10/30/23 09:56
Matrix: Water
Date Received: 11/01/23 10:30

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		11/15/23 15:09	11/17/23 17:32	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:32	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	106		50 - 200	11/15/23 15:09	11/17/23 17:32	1
13C6 PFDA	107		50 - 200	11/15/23 15:09	11/17/23 17:32	1
13C5 PFHxA	117		50 - 200	11/15/23 15:09	11/17/23 17:32	1
13C4 PFHpA	115		50 - 200	11/15/23 15:09	11/17/23 17:32	1

Client Sample ID: FB MOANALUA WELLS
Date Collected: 10/30/23 09:56
Date Received: 11/01/23 10:30

Lab Sample ID: 380-69290-9
Matrix: Water

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 PFOA	*112*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:32*	*1*
13C9 PFNA	*116*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:32*	*1*
13C7 PFUnA	*107*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:32*	*1*
13C2 PFDoA	*111*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:32*	*1*
13C4 PFBA	*108*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:32*	*1*
13C5 PFPeA	*128*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:32*	*1*
13C3 PFBS	*95*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:32*	*1*
13C3 PFHxS	*105*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:32*	*1*
13C8 PFOS	*107*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:32*	*1*
13C2-4:2-FTS	*112*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:32*	*1*
13C2-6:2-FTS	*107*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:32*	*1*
13C2-8:2-FTS	*110*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:32*	*1*

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

Analyte	**Result**	**Qualifier**	**RL**	**Unit**	**D**	**Prepared**	**Analyzed**	**Dil Fac**
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:49	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:49	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:49	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:49	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:49	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:49	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:49	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:49	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:49	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:49	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:49	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:49	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:49	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:49	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:49	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:49	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		11/09/23 10:46	11/13/23 14:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*105*		*70 - 130*	*11/09/23 10:46*	*11/13/23 14:49*	*1*
13C2 PFHxA	*110*		*70 - 130*	*11/09/23 10:46*	*11/13/23 14:49*	*1*
13C2 PFDA	*114*		*70 - 130*	*11/09/23 10:46*	*11/13/23 14:49*	*1*
13C3-GenX	*109*		*70 - 130*	*11/09/23 10:46*	*11/13/23 14:49*	*1*

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

Job ID: 380-69290-1

Client Sample ID: FB AIEA GULCH WELLS PUMP 2
Date Collected: 10/30/23 11:09
Date Received: 11/01/23 10:30

Lab Sample ID: 380-69290-10
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		11/15/23 15:09	11/17/23 17:41	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:41	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*102*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:41*	*1*
13C6 PFDA	*105*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:41*	*1*
13C5 PFHxA	*110*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:41*	*1*
13C4 PFHpA	*110*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:41*	*1*
13C8 PFOA	*107*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:41*	*1*
13C9 PFNA	*115*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:41*	*1*
13C7 PFUnA	*102*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:41*	*1*
13C2 PFDoA	*108*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:41*	*1*
13C4 PFBA	*109*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:41*	*1*
13C5 PFPeA	*120*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:41*	*1*
13C3 PFBS	*97*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:41*	*1*
13C3 PFHxS	*103*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:41*	*1*
13C8 PFOS	*106*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:41*	*1*

Client Sample ID: FB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-69290-10

Date Collected: 10/30/23 11:09

Matrix: Water

Date Received: 11/01/23 10:30

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-4:2-FTS	113		50 - 200	11/15/23 15:09	11/17/23 17:41	1
13C2-6:2-FTS	102		50 - 200	11/15/23 15:09	11/17/23 17:41	1
13C2-8:2-FTS	118		50 - 200	11/15/23 15:09	11/17/23 17:41	1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:58	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:58	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:58	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:58	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:58	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:58	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:58	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:58	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:58	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:58	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:58	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:58	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:58	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:58	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:58	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:58	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 14:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	99		70 - 130	11/09/23 10:46	11/13/23 14:58	1
13C2 PFHxA	103		70 - 130	11/09/23 10:46	11/13/23 14:58	1
13C2 PFDA	100		70 - 130	11/09/23 10:46	11/13/23 14:58	1
13C3-GenX	97		70 - 130	11/09/23 10:46	11/13/23 14:58	1

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-69290-11

Date Collected: 10/30/23 11:44

Matrix: Water

Date Received: 11/01/23 10:30

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		11/15/23 15:09	11/17/23 17:51	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260) P2
Date Collected: 10/30/23 11:44
Date Received: 11/01/23 10:30

Lab Sample ID: 380-69290-11
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 17:51	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*101*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:51*	*1*
13C6 PFDA	*107*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:51*	*1*
13C5 PFHxA	*109*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:51*	*1*
13C4 PFHpA	*110*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:51*	*1*
13C8 PFOA	*111*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:51*	*1*
13C9 PFNA	*113*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:51*	*1*
13C7 PFUnA	*101*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:51*	*1*
13C2 PFDoA	*105*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:51*	*1*
13C4 PFBA	*108*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:51*	*1*
13C5 PFPeA	*115*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:51*	*1*
13C3 PFBS	*96*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:51*	*1*
13C3 PFHxS	*102*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:51*	*1*
13C8 PFOS	*109*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:51*	*1*
13C2-4:2-FTS	*112*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:51*	*1*
13C2-6:2-FTS	*104*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:51*	*1*
13C2-8:2-FTS	*109*		*50 - 200*	*11/15/23 15:09*	*11/17/23 17:51*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:08	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:08	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:08	1

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-69290-11

Date Collected: 10/30/23 11:44

Matrix: Water

Date Received: 11/01/23 10:30

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:08	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:08	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:08	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:08	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:08	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:08	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:08	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:08	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:08	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:08	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:08	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:08	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*102*		*70 - 130*	*11/09/23 10:46*	*11/13/23 15:08*	*1*
13C2 PFHxA	*112*		*70 - 130*	*11/09/23 10:46*	*11/13/23 15:08*	*1*
13C2 PFDA	*114*		*70 - 130*	*11/09/23 10:46*	*11/13/23 15:08*	*1*
13C3-GenX	*104*		*70 - 130*	*11/09/23 10:46*	*11/13/23 15:08*	*1*

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-69290-12

Date Collected: 10/30/23 10:37

Matrix: Water

Date Received: 11/01/23 10:30

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		11/15/23 15:09	11/17/23 18:00	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1

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

Job ID: 380-69290-1

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2 P1
Date Collected: 10/30/23 10:37
Date Received: 11/01/23 10:30

Lab Sample ID: 380-69290-12
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		11/15/23 15:09	11/17/23 18:00	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*102*		*50 - 200*	*11/15/23 15:09*	*11/17/23 18:00*	*1*
13C6 PFDA	*106*		*50 - 200*	*11/15/23 15:09*	*11/17/23 18:00*	*1*
13C5 PFHxA	*106*		*50 - 200*	*11/15/23 15:09*	*11/17/23 18:00*	*1*
13C4 PFHpA	*102*		*50 - 200*	*11/15/23 15:09*	*11/17/23 18:00*	*1*
13C8 PFOA	*105*		*50 - 200*	*11/15/23 15:09*	*11/17/23 18:00*	*1*
13C9 PFNA	*112*		*50 - 200*	*11/15/23 15:09*	*11/17/23 18:00*	*1*
13C7 PFUnA	*100*		*50 - 200*	*11/15/23 15:09*	*11/17/23 18:00*	*1*
13C2 PFDoA	*105*		*50 - 200*	*11/15/23 15:09*	*11/17/23 18:00*	*1*
13C4 PFBA	*109*		*50 - 200*	*11/15/23 15:09*	*11/17/23 18:00*	*1*
13C5 PFPeA	*114*		*50 - 200*	*11/15/23 15:09*	*11/17/23 18:00*	*1*
13C3 PFBS	*96*		*50 - 200*	*11/15/23 15:09*	*11/17/23 18:00*	*1*
13C3 PFHxS	*96*		*50 - 200*	*11/15/23 15:09*	*11/17/23 18:00*	*1*
13C8 PFOS	*106*		*50 - 200*	*11/15/23 15:09*	*11/17/23 18:00*	*1*
13C2-4:2-FTS	*110*		*50 - 200*	*11/15/23 15:09*	*11/17/23 18:00*	*1*
13C2-6:2-FTS	*105*		*50 - 200*	*11/15/23 15:09*	*11/17/23 18:00*	*1*
13C2-8:2-FTS	*113*		*50 - 200*	*11/15/23 15:09*	*11/17/23 18:00*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:17	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:17	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:17	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:17	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:17	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:17	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:17	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:17	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:17	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:17	1

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

Job ID: 380-69290-1

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2 P1
Date Collected: 10/30/23 10:37
Date Received: 11/01/23 10:30

Lab Sample ID: 380-69290-12
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:17	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:17	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:17	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:17	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:17	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:17	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:17	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		11/09/23 10:46	11/13/23 15:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*116*		*70 - 130*	*11/09/23 10:46*	*11/13/23 15:17*	*1*
13C2 PFHxA	*125*		*70 - 130*	*11/09/23 10:46*	*11/13/23 15:17*	*1*
13C2 PFDA	*121*		*70 - 130*	*11/09/23 10:46*	*11/13/23 15:17*	*1*
13C3-GenX	*118*		*70 - 130*	*11/09/23 10:46*	*11/13/23 15:17*	*1*

Action Limit Summary

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

Job ID: 380-69290-1

Client Sample ID: MOANALUA WELLS
Lab Sample ID: 380-69290-1

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 Limit	RL	Method	Prep Type
Alachlor	<0.050		ug/L	2	0.050	525.2	Total/NA
Atrazine	<0.050		ug/L	3	0.050	525.2	Total/NA
Benzo[a]pyrene	<0.020		ug/L	0.2	0.020	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.60		ug/L	6	0.60	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.60		ug/L	400	0.60	525.2	Total/NA
Endrin	<0.099		ug/L	2	0.099	525.2	Total/NA
Heptachlor	<0.040		ug/L	0.4	0.040	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.050		ug/L	0.2	0.050	525.2	Total/NA
Hexachlorobenzene	<0.050		ug/L	1	0.050	525.2	Total/NA
Hexachlorocyclopentadiene	<0.050		ug/L	50	0.050	525.2	Total/NA
Lindane	<0.040		ug/L	0.2	0.040	525.2	Total/NA
Methoxychlor	<0.099		ug/L	40	0.099	525.2	Total/NA
Simazine	<0.050		ug/L	4	0.050	525.2	Total/NA

Client Sample ID: AIEA GULCH WELLS PUMP 2
Lab Sample ID: 380-69290-2

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 Limit	RL	Method	Prep Type
Alachlor	<0.049		ug/L	2	0.049	525.2	Total/NA
Atrazine	<0.049		ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	<0.020		ug/L	0.2	0.020	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.59		ug/L	6	0.59	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.59		ug/L	400	0.59	525.2	Total/NA
Endrin	<0.099		ug/L	2	0.099	525.2	Total/NA
Heptachlor	<0.039		ug/L	0.4	0.039	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.049		ug/L	0.2	0.049	525.2	Total/NA
Hexachlorobenzene	<0.049		ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	<0.049		ug/L	50	0.049	525.2	Total/NA
Lindane	<0.039		ug/L	0.2	0.039	525.2	Total/NA
Methoxychlor	<0.099		ug/L	40	0.099	525.2	Total/NA
Simazine	<0.049		ug/L	4	0.049	525.2	Total/NA

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
Lab Sample ID: 380-69290-3

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 Limit	RL	Method	Prep Type
Alachlor	<0.049		ug/L	2	0.049	525.2	Total/NA
Atrazine	<0.049		ug/L	3	0.049	525.2	Total/NA

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2 (Continued)

Lab Sample ID: 380-69290-3

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 Limit	RL	Method	Prep Type
Benzo[a]pyrene	<0.020		ug/L	0.2	0.020	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.59		ug/L	6	0.59	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.59		ug/L	400	0.59	525.2	Total/NA
Endrin	<0.099		ug/L	2	0.099	525.2	Total/NA
Heptachlor	<0.039		ug/L	0.4	0.039	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.049		ug/L	0.2	0.049	525.2	Total/NA
Hexachlorobenzene	<0.049		ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	<0.049		ug/L	50	0.049	525.2	Total/NA
Lindane	<0.039		ug/L	0.2	0.039	525.2	Total/NA
Methoxychlor	<0.099		ug/L	40	0.099	525.2	Total/NA
Simazine	<0.049		ug/L	4	0.049	525.2	Total/NA

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-69290-4

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 Limit	RL	Method	Prep Type
Alachlor	<0.050		ug/L	2	0.050	525.2	Total/NA
Atrazine	<0.050		ug/L	3	0.050	525.2	Total/NA
Benzo[a]pyrene	<0.020		ug/L	0.2	0.020	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.60		ug/L	6	0.60	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.60		ug/L	400	0.60	525.2	Total/NA
Endrin	<0.10		ug/L	2	0.10	525.2	Total/NA
Heptachlor	<0.040		ug/L	0.4	0.040	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.050		ug/L	0.2	0.050	525.2	Total/NA
Hexachlorobenzene	<0.050		ug/L	1	0.050	525.2	Total/NA
Hexachlorocyclopentadiene	<0.050		ug/L	50	0.050	525.2	Total/NA
Lindane	<0.040		ug/L	0.2	0.040	525.2	Total/NA
Methoxychlor	<0.10		ug/L	40	0.10	525.2	Total/NA
Simazine	<0.050		ug/L	4	0.050	525.2	Total/NA

Surrogate Summary

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

Job ID: 380-69290-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS)

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

		Percent Surrogate Recovery (Acceptance Limits)		
		2NMX	PRY	TPP
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
380-69290-1	MOANALUA WELLS	97	98	116
380-69290-2	AIEA GULCH WELLS PUMP 2	96	103	114
380-69290-3	AIEA WELLS PUMPS 1&2 (260) P2	96	101	115
380-69290-4	HALAWA WELLS UNITS 1 & 2 P1	97	103	114

Surrogate Legend

2NMX = 2-Nitro-m-xylene
PRY = Perylene-d12
TPP = Triphenylphosphate

Method: 525.2 - Semivolatile Organic Compounds (GC/MS)

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

		Percent Surrogate Recovery (Acceptance Limits)		
		2NMX	PRY	TPP
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
380-69264-V-1-A MS	Matrix Spike	93	103	117
380-69269-AP-1-A DU	Duplicate	95	97	114
LCS 380-62312/23-A	Lab Control Sample	95	103	114
MB 380-62312/21-A	Method Blank	97	99	116
MRL 380-62312/22-A	Lab Control Sample	95	99	115

Surrogate Legend

2NMX = 2-Nitro-m-xylene
PRY = Perylene-d12
TPP = Triphenylphosphate

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

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)
380-69290-1	MOANALUA WELLS	98	110	109	101
380-69290-1 MS	MOANALUA WELLS	106	109	106	104
380-69290-1 MSD	MOANALUA WELLS	101	102	106	100
380-69290-2	AIEA GULCH WELLS PUMP 2	110	104	112	105
380-69290-3	AIEA WELLS PUMPS 1&2 (260) P2	106	102	102	101
380-69290-4	HALAWA WELLS UNITS 1 & 2 P1	99	118	112	108

Surrogate Legend

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

Surrogate Summary

Client: City & County of Honolulu
Job ID: 380-69290-1
Project/Site: RED-HILL

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

Matrix: Water
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-69290-9	FB MOANALUA WELLS	105	110	114	109
380-69290-10	FB AIEA GULCH WELLS PUMP 2	99	103	100	97
380-69290-11	FB AIEA WELLS PUMPS 1&2 (260) P2	102	112	114	104
380-69290-12	FB HALAWA WELLS UNITS 1 & 2 P1	116	125	121	118
LCS 380-63219/25-A	Lab Control Sample	100	114	108	110
LCSD 380-63219/26-A	Lab Control Sample Dup	99	111	110	103
MBL 380-63219/23-A	Method Blank	88	104	92	95
MRL 380-63219/24-A	Lab Control Sample	94	106	99	101

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: 380-69290-1

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

Matrix: Drinking 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)
380-69290-1	MOANALUA WELLS	94	99	101	93	100	104	95	98
380-69290-2	AIEA GULCH WELLS PUMP 2	87	94	95	95	90	101	95	100
380-69290-3	AIEA WELLS PUMPS 1&2 (260) P2	85	101	93	95	96	106	95	103
380-69290-4	HALAWA WELLS UNITS 1 & 2 P1	94	104	95	101	102	110	97	103
380-69290-4 LMS	HALAWA WELLS UNITS 1 & 2 P1	82	93	90	91	89	101	99	108
380-69290-4 LMSD	HALAWA WELLS UNITS 1 & 2 P1	72	97	81	83	89	104	98	105

		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)
380-69290-1	MOANALUA WELLS	104	115	95	99	102	113	105	104
380-69290-2	AIEA GULCH WELLS PUMP 2	96	101	96	100	103	110	101	114
380-69290-3	AIEA WELLS PUMPS 1&2 (260) P2	98	102	93	97	105	111	104	120
380-69290-4	HALAWA WELLS UNITS 1 & 2 P1	101	119	102	107	108	118	112	121
380-69290-4 LMS	HALAWA WELLS UNITS 1 & 2 P1	93	96	111	111	117	116	115	137
380-69290-4 LMSD	HALAWA WELLS UNITS 1 & 2 P1	79	81	108	105	109	124	126	131

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)							
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)
380-69290-9	FB MOANALUA WELLS	106	107	117	115	112	116	107	111
380-69290-10	FB AIEA GULCH WELLS PUMP 2	102	105	110	110	107	115	102	108
380-69290-11	FB AIEA WELLS PUMPS 1&2 (260) P2	101	107	109	110	111	113	101	105

Isotope Dilution Summary

Client: City & County of Honolulu
Job ID: 380-69290-1
Project/Site: RED-HILL

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

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)
380-69290-12	FB HALAWA WELLS UNITS 1 &	102	106	106	102	105	112	100	105
LCS 380-63890/22-A	Lab Control Sample	116	118	122	117	114	115	113	117
LCSD 380-63890/23-A	Lab Control Sample Dup	116	115	115	110	112	118	116	118
MBL 380-63890/20-A	Method Blank	103	105	113	108	113	117	107	111
MRL 380-63890/21-A	Lab Control Sample	104	115	110	110	113	119	111	114

		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)
380-69290-9	FB MOANALUA WELLS	108	128	95	105	107	112	107	110
380-69290-10	FB AIEA GULCH WELLS PUMP 2	109	120	97	103	106	113	102	118
380-69290-11	FB AIEA WELLS PUMPS 1&2 (260) P2	108	115	96	102	109	112	104	109
380-69290-12	FB HALAWA WELLS UNITS 1 & 2 P1	109	114	96	96	106	110	105	113
LCS 380-63890/22-A	Lab Control Sample	118	119	109	110	111	115	108	109
LCSD 380-63890/23-A	Lab Control Sample Dup	110	114	114	111	113	119	112	118
MBL 380-63890/20-A	Method Blank	114	122	108	108	112	116	114	113
MRL 380-63890/21-A	Lab Control Sample	106	107	111	111	110	122	113	123

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: 525.2 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 380-62312/21-A
Matrix: Water
Analysis Batch: 62512

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62312

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
2,4'-DDD	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
2,4'-DDE	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
2,4'-DDT	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
2,4-Dinitrotoluene	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
2,6-Dinitrotoluene	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
2-Methylnaphthalene	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
4,4'-DDD	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
4,4'-DDE	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
4,4'-DDT	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Acenaphthene	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Acenaphthylene	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Acetochlor	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Alachlor	<0.050		0.050		ug/L		11/03/23 09:15	11/05/23 11:50	1
alpha-BHC	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
alpha-Chlordane	<0.050		0.050		ug/L		11/03/23 09:15	11/05/23 11:50	1
Anthracene	<0.020		0.020		ug/L		11/03/23 09:15	11/05/23 11:50	1
Atrazine	<0.050		0.050		ug/L		11/03/23 09:15	11/05/23 11:50	1
Benz(a)anthracene	<0.050		0.050		ug/L		11/03/23 09:15	11/05/23 11:50	1
Benzo[a]pyrene	<0.020		0.020		ug/L		11/03/23 09:15	11/05/23 11:50	1
Benzo[b]fluoranthene	<0.020		0.020		ug/L		11/03/23 09:15	11/05/23 11:50	1
Benzo[g,h,i]perylene	<0.050		0.050		ug/L		11/03/23 09:15	11/05/23 11:50	1
Benzo[k]fluoranthene	<0.020		0.020		ug/L		11/03/23 09:15	11/05/23 11:50	1
beta-BHC	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Bis(2-ethylhexyl) phthalate	<0.60		0.60		ug/L		11/03/23 09:15	11/05/23 11:50	1
Bromacil	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Butachlor	<0.050		0.050		ug/L		11/03/23 09:15	11/05/23 11:50	1
Butylbenzylphthalate	<0.50		0.50		ug/L		11/03/23 09:15	11/05/23 11:50	1
Chlorobenzilate	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Chloroneb	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Chlorpyrifos	<0.050		0.050		ug/L		11/03/23 09:15	11/05/23 11:50	1
Chrysene	<0.020		0.020		ug/L		11/03/23 09:15	11/05/23 11:50	1
delta-BHC	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Di(2-ethylhexyl)adipate	<0.60		0.60		ug/L		11/03/23 09:15	11/05/23 11:50	1
Dibenz(a,h)anthracene	<0.050		0.050		ug/L		11/03/23 09:15	11/05/23 11:50	1
Diclorvos (DDVP)	<0.050		0.050		ug/L		11/03/23 09:15	11/05/23 11:50	1
Dieldrin	<0.20		0.20		ug/L		11/03/23 09:15	11/05/23 11:50	1
Diethylphthalate	<0.50		0.50		ug/L		11/03/23 09:15	11/05/23 11:50	1
Dimethylphthalate	<0.50		0.50		ug/L		11/03/23 09:15	11/05/23 11:50	1
Di-n-butyl phthalate	<0.99		0.99		ug/L		11/03/23 09:15	11/05/23 11:50	1
Di-n-octyl phthalate	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Endosulfan I (Alpha)	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Endosulfan II (Beta)	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Endosulfan sulfate	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Endrin	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Endrin aldehyde	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
EPTC	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 380-62312/21-A
Matrix: Water
Analysis Batch: 62512

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 62312

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Fluorene	<0.050		0.050		ug/L		11/03/23 09:15	11/05/23 11:50	1
gamma-Chlordane	<0.050		0.050		ug/L		11/03/23 09:15	11/05/23 11:50	1
Heptachlor	<0.040		0.040		ug/L		11/03/23 09:15	11/05/23 11:50	1
Heptachlor epoxide (isomer B)	<0.050		0.050		ug/L		11/03/23 09:15	11/05/23 11:50	1
Hexachlorobenzene	<0.050		0.050		ug/L		11/03/23 09:15	11/05/23 11:50	1
Hexachlorocyclopentadiene	<0.050		0.050		ug/L		11/03/23 09:15	11/05/23 11:50	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050		ug/L		11/03/23 09:15	11/05/23 11:50	1
Isophorone	<0.50		0.50		ug/L		11/03/23 09:15	11/05/23 11:50	1
Lindane	<0.040		0.040		ug/L		11/03/23 09:15	11/05/23 11:50	1
Malathion	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Methoxychlor	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Metolachlor	<0.050		0.050		ug/L		11/03/23 09:15	11/05/23 11:50	1
Molinate	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Naphthalene	<0.30		0.30		ug/L		11/03/23 09:15	11/05/23 11:50	1
Parathion	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Pendimethalin (Penoxaline)	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Phenanthrene	<0.040		0.040		ug/L		11/03/23 09:15	11/05/23 11:50	1
Propachlor	<0.050		0.050		ug/L		11/03/23 09:15	11/05/23 11:50	1
Pyrene	<0.050		0.050		ug/L		11/03/23 09:15	11/05/23 11:50	1
Simazine	<0.050		0.050		ug/L		11/03/23 09:15	11/05/23 11:50	1
Terbacil	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Terbuthylazine	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1
Thiobencarb	<0.20		0.20		ug/L		11/03/23 09:15	11/05/23 11:50	1
Total Permethrin (mixed isomers)	<0.20		0.20		ug/L		11/03/23 09:15	11/05/23 11:50	1
trans-Nonachlor	<0.050		0.050		ug/L		11/03/23 09:15	11/05/23 11:50	1
Trifluralin	<0.099		0.099		ug/L		11/03/23 09:15	11/05/23 11:50	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Decane	*2.89*	*T J N*	*ug/L*		*2.42*	*124-18-5*	*11/03/23 09:15*	*11/05/23 11:50*	*1*
Unknown	*0.859*	*T J*	*ug/L*		*5.85*	*N/A*	*11/03/23 09:15*	*11/05/23 11:50*	*1*
Oleic Acid	*0.569*	*T J N*	*ug/L*		*6.47*	*112-80-1*	*11/03/23 09:15*	*11/05/23 11:50*	*1*
Unknown	*0.598*	*T J*	*ug/L*		*6.54*	*N/A*	*11/03/23 09:15*	*11/05/23 11:50*	*1*
9-Octadecenamide, (Z)-	*0.881*	*T J N*	*ug/L*		*7.55*	*301-02-0*	*11/03/23 09:15*	*11/05/23 11:50*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*97*		*70 - 130*	*11/03/23 09:15*	*11/05/23 11:50*	*1*
Perylene-d12	*99*		*70 - 130*	*11/03/23 09:15*	*11/05/23 11:50*	*1*
Triphenylphosphate	*116*		*70 - 130*	*11/03/23 09:15*	*11/05/23 11:50*	*1*

Lab Sample ID: LCS 380-62312/23-A
Matrix: Water
Analysis Batch: 62512

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62312

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	1.98	1.92		ug/L		97	70 - 130
2,4'-DDD	1.98	2.04		ug/L		103	70 - 130
2,4'-DDE	1.98	2.07		ug/L		104	70 - 130

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 380-62312/23-A
Matrix: Water
Analysis Batch: 62512

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62312

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDT	1.98	2.01		ug/L		101	70 - 130
2,4-Dinitrotoluene	1.98	2.01		ug/L		101	70 - 130
2,6-Dinitrotoluene	1.98	1.88		ug/L		95	70 - 130
2-Methylnaphthalene	1.98	1.98		ug/L		100	70 - 130
4,4'-DDD	1.98	2.03		ug/L		102	70 - 130
4,4'-DDE	1.98	2.10		ug/L		106	70 - 130
4,4'-DDT	1.98	1.87		ug/L		94	70 - 130
Acenaphthene	1.98	1.86		ug/L		94	70 - 130
Acenaphthylene	1.98	1.85		ug/L		93	70 - 130
Acetochlor	1.98	2.02		ug/L		102	70 - 130
Alachlor	1.98	2.18		ug/L		110	70 - 130
alpha-BHC	1.98	1.98		ug/L		100	70 - 130
alpha-Chlordane	1.98	2.37		ug/L		119	70 - 130
Anthracene	1.98	1.99		ug/L		100	70 - 130
Atrazine	1.98	2.28		ug/L		115	70 - 130
Benz(a)anthracene	1.98	1.97		ug/L		99	70 - 130
Benzo[a]pyrene	1.98	1.99		ug/L		101	70 - 130
Benzo[b]fluoranthene	1.98	2.00		ug/L		101	70 - 130
Benzo[g,h,i]perylene	1.98	2.11		ug/L		107	70 - 130
Benzo[k]fluoranthene	1.98	2.10		ug/L		106	70 - 130
beta-BHC	1.98	1.97		ug/L		100	70 - 130
Bis(2-ethylhexyl) phthalate	1.98	2.04		ug/L		103	70 - 130
Bromacil	1.98	2.38		ug/L		120	70 - 130
Butachlor	1.98	2.33		ug/L		117	70 - 130
Butylbenzylphthalate	1.98	2.20		ug/L		111	70 - 130
Chlorobenzilate	1.98	2.18		ug/L		110	70 - 130
Chloroneb	1.98	2.09		ug/L		106	70 - 130
Chlorothalonil (Draconil, Bravo)	1.98	2.11		ug/L		106	70 - 130
Chlorpyrifos	1.98	2.24		ug/L		113	70 - 130
Chrysene	1.98	1.99		ug/L		100	70 - 130
delta-BHC	1.98	1.96		ug/L		99	70 - 130
Di(2-ethylhexyl)adipate	1.98	2.29		ug/L		116	70 - 130
Dibenz(a,h)anthracene	1.98	2.15		ug/L		108	70 - 130
Diclorvos (DDVP)	1.98	2.07		ug/L		104	70 - 130
Dieldrin	1.98	2.03		ug/L		102	70 - 130
Diethylphthalate	1.98	1.99		ug/L		100	70 - 130
Dimethylphthalate	1.98	1.96		ug/L		99	70 - 130
Di-n-butyl phthalate	3.96	4.30		ug/L		109	70 - 130
Di-n-octyl phthalate	1.98	1.69		ug/L		85	70 - 130
Endosulfan I (Alpha)	1.98	1.97		ug/L		99	70 - 130
Endosulfan II (Beta)	1.98	2.08		ug/L		105	70 - 130
Endosulfan sulfate	1.98	2.24		ug/L		113	70 - 130
Endrin	1.98	2.10		ug/L		106	70 - 130
Endrin aldehyde	1.98	2.13		ug/L		107	70 - 130
EPTC	1.98	2.17		ug/L		110	70 - 130
Fluoranthene	1.98	2.12		ug/L		107	70 - 130
Fluorene	1.98	2.06		ug/L		104	70 - 130
gamma-Chlordane	1.98	2.34		ug/L		118	70 - 130
Heptachlor	1.98	2.06		ug/L		104	70 - 130

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 380-62312/23-A
Matrix: Water
Analysis Batch: 62512

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62312

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Heptachlor epoxide (isomer B)	1.98	2.52		ug/L		127	70 - 130
Hexachlorobenzene	1.98	2.19		ug/L		111	70 - 130
Hexachlorocyclopentadiene	1.98	1.89		ug/L		96	70 - 130
Indeno[1,2,3-cd]pyrene	1.98	2.16		ug/L		109	70 - 130
Isophorone	1.98	1.79		ug/L		90	70 - 130
Lindane	1.98	2.03		ug/L		103	70 - 130
Malathion	1.98	2.40		ug/L		121	70 - 130
Methoxychlor	1.98	1.93		ug/L		97	70 - 130
Metolachlor	1.98	2.15		ug/L		108	70 - 130
Molinate	1.98	2.15		ug/L		108	70 - 130
Naphthalene	1.98	1.84		ug/L		93	70 - 130
Parathion	1.98	2.04		ug/L		103	70 - 130
Pendimethalin (Penoxaline)	1.98	2.08		ug/L		105	70 - 130
Phenanthrene	1.98	1.99		ug/L		100	70 - 130
Propachlor	1.98	2.12		ug/L		107	70 - 130
Pyrene	1.98	2.09		ug/L		105	70 - 130
Simazine	1.98	2.32		ug/L		117	70 - 130
Terbacil	1.98	2.12		ug/L		107	70 - 130
Terbuthylazine	1.98	2.14		ug/L		108	70 - 130
Thiobencarb	1.98	2.08		ug/L		105	70 - 130
trans-Nonachlor	1.98	2.09		ug/L		105	70 - 130
Trifluralin	1.98	2.46		ug/L		124	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Nitro-m-xylene	*95*		*70 - 130*
Perylene-d12	*103*		*70 - 130*
Triphenylphosphate	*114*		*70 - 130*

Lab Sample ID: MRL 380-62312/22-A
Matrix: Water
Analysis Batch: 62512

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62312

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0993	0.110		ug/L		111	50 - 150
2,4'-DDD	0.0993	0.130		ug/L		131	50 - 150
2,4'-DDE	0.0993	0.100		ug/L		101	50 - 150
2,4'-DDT	0.0993	0.0894	J	ug/L		90	50 - 150
2,4-Dinitrotoluene	0.0993	0.0772	J	ug/L		78	50 - 150
2,6-Dinitrotoluene	0.0993	0.0840	J	ug/L		85	50 - 150
2-Methylnaphthalene	0.0993	0.108		ug/L		109	50 - 150
4,4'-DDD	0.0993	0.100		ug/L		101	50 - 150
4,4'-DDE	0.0993	0.132		ug/L		133	50 - 150
4,4'-DDT	0.0993	0.118		ug/L		119	50 - 150
Acenaphthene	0.0993	0.0945	J	ug/L		95	50 - 150
Acenaphthylene	0.0993	0.0863	J	ug/L		87	50 - 150
Acetochlor	0.0497	0.0428	J	ug/L		86	50 - 150
Alachlor	0.0497	0.0577		ug/L		116	50 - 150
alpha-BHC	0.0993	0.0944	J	ug/L		95	50 - 150

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MRL 380-62312/22-A
Matrix: Water
Analysis Batch: 62512

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62312

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
alpha-Chlordane	0.0248	0.0294	J	ug/L		118	50 - 150
Anthracene	0.0199	0.0205		ug/L		103	50 - 150
Atrazine	0.0497	0.0536		ug/L		108	50 - 150
Benz(a)anthracene	0.0497	0.0452	J	ug/L		91	50 - 150
Benzo[a]pyrene	0.0199	0.0165	J	ug/L		83	50 - 150
Benzo[b]fluoranthene	0.0199	0.0172	J	ug/L		87	50 - 150
Benzo[g,h,i]perylene	0.0497	0.0475	J	ug/L		96	50 - 150
Benzo[k]fluoranthene	0.0199	0.0189	J	ug/L		95	50 - 150
beta-BHC	0.0993	0.0912	J	ug/L		92	50 - 150
Bis(2-ethylhexyl) phthalate	0.596	0.719		ug/L		121	50 - 150
Bromacil	0.0993	0.114		ug/L		115	50 - 150
Butachlor	0.0497	0.0590		ug/L		119	50 - 150
Butylbenzylphthalate	0.149	0.173	J	ug/L		116	50 - 150
Chlorobenzilate	0.0993	0.124		ug/L		125	50 - 150
Chloroneb	0.0993	0.101		ug/L		102	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0993	0.156	^3+	ug/L		157	50 - 150
Chlorpyrifos	0.0497	0.0507		ug/L		102	50 - 150
Chrysene	0.0199	0.0201		ug/L		101	50 - 150
delta-BHC	0.0993	0.101		ug/L		102	50 - 150
Di(2-ethylhexyl)adipate	0.298	0.389	J	ug/L		131	50 - 150
Dibenz(a,h)anthracene	0.0497	0.0452	J	ug/L		91	50 - 150
Diclorvos (DDVP)	0.0497	0.0491	J	ug/L		99	50 - 150
Dieldrin	0.0993	0.0966	J	ug/L		97	50 - 150
Diethylphthalate	0.149	0.164	J	ug/L		110	50 - 150
Dimethylphthalate	0.298	0.287	J	ug/L		96	50 - 150
Di-n-butyl phthalate	0.298	0.358	J	ug/L		120	49 - 243
Di-n-octyl phthalate	0.0993	0.123		ug/L		124	50 - 150
Endosulfan I (Alpha)	0.0993	0.0927	J	ug/L		93	50 - 150
Endosulfan II (Beta)	0.0993	0.133		ug/L		134	50 - 150
Endosulfan sulfate	0.0993	0.0922	J	ug/L		93	50 - 150
Endrin	0.0993	0.0925	J	ug/L		93	50 - 150
Endrin aldehyde	0.0993	0.147		ug/L		148	50 - 150
EPTC	0.0993	0.108		ug/L		109	50 - 150
Fluoranthene	0.0497	0.0529	J	ug/L		106	50 - 150
Fluorene	0.0497	<0.050		ug/L		99	50 - 150
gamma-Chlordane	0.0248	0.0341	J	ug/L		137	50 - 150
Heptachlor	0.0397	0.0381	J	ug/L		96	50 - 150
Heptachlor epoxide (isomer B)	0.0497	0.0641		ug/L		129	50 - 150
Hexachlorobenzene	0.0497	0.0433	J	ug/L		87	50 - 150
Hexachlorocyclopentadiene	0.0497	0.0442	J	ug/L		89	50 - 150
Indeno[1,2,3-cd]pyrene	0.0497	0.0441	J	ug/L		89	50 - 150
Isophorone	0.0993	0.0943	J	ug/L		95	50 - 150
Lindane	0.0397	0.0378	J	ug/L		95	50 - 150
Malathion	0.0993	0.107		ug/L		108	50 - 150
Methoxychlor	0.0993	0.105		ug/L		106	50 - 150
Metolachlor	0.0497	0.0551		ug/L		111	50 - 150
Molinate	0.0993	0.106		ug/L		106	50 - 150
Naphthalene	0.0993	0.115	J	ug/L		115	50 - 150
Parathion	0.0993	0.128		ug/L		129	50 - 150

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MRL 380-62312/22-A
Matrix: Water
Analysis Batch: 62512

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 62312

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Pendimethalin (Penoxaline)	0.0993	0.0953	J	ug/L		96	50 - 150
Phenanthrene	0.0199	0.0219	J	ug/L		111	50 - 150
Propachlor	0.0497	0.0514		ug/L		103	50 - 150
Pyrene	0.0497	0.0517		ug/L		104	50 - 150
Simazine	0.0497	0.0511		ug/L		103	50 - 150
Terbacil	0.0993	0.113		ug/L		113	50 - 150
Terbuthylazine	0.0993	0.105		ug/L		105	50 - 150
Thiobencarb	0.0993	0.109	J	ug/L		109	50 - 150
trans-Nonachlor	0.0248	0.0268	J	ug/L		108	50 - 150
Trifluralin	0.0993	0.0792	J	ug/L		80	50 - 150

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
2-Nitro-m-xylene	*95*		*70 - 130*
Perylene-d12	*99*		*70 - 130*
Triphenylphosphate	*115*		*70 - 130*

Lab Sample ID: 380-69264-V-1-A MS
Matrix: Water
Analysis Batch: 62512

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62312

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.098		1.98	1.92		ug/L		97	70 - 130
2,4'-DDD	<0.098		1.98	2.25		ug/L		114	70 - 130
2,4'-DDE	<0.098		1.98	2.28		ug/L		115	70 - 130
2,4'-DDT	<0.098		1.98	2.28		ug/L		115	70 - 130
2,4-Dinitrotoluene	<0.098		1.98	1.95		ug/L		98	70 - 130
2,6-Dinitrotoluene	<0.098		1.98	1.85		ug/L		93	70 - 130
2-Methylnaphthalene	<0.098		1.98	1.98		ug/L		100	70 - 130
4,4'-DDD	<0.098		1.98	2.21		ug/L		112	70 - 130
4,4'-DDE	<0.098		1.98	2.35		ug/L		118	70 - 130
4,4'-DDT	<0.098		1.98	2.13		ug/L		108	70 - 130
Acenaphthene	<0.098		1.98	1.83		ug/L		92	70 - 130
Acenaphthylene	<0.098		1.98	1.85		ug/L		94	70 - 130
Acetochlor	<0.098		1.98	1.99		ug/L		101	70 - 130
Alachlor	<0.049		1.98	2.08		ug/L		105	70 - 130
alpha-BHC	<0.098		1.98	1.94		ug/L		98	70 - 130
alpha-Chlordane	<0.049		1.98	2.57		ug/L		130	70 - 130
Anthracene	<0.020		1.98	1.93		ug/L		97	70 - 130
Atrazine	<0.049		1.98	2.26		ug/L		114	70 - 130
Benz(a)anthracene	<0.049		1.98	2.15		ug/L		109	70 - 130
Benzo[a]pyrene	<0.020		1.98	1.92		ug/L		97	70 - 130
Benzo[b]fluoranthene	<0.020		1.98	2.08		ug/L		105	70 - 130
Benzo[g,h,i]perylene	<0.049		1.98	2.31		ug/L		117	70 - 130
Benzo[k]fluoranthene	<0.020		1.98	2.13		ug/L		107	70 - 130
beta-BHC	<0.098		1.98	1.89		ug/L		95	70 - 130
Bis(2-ethylhexyl) phthalate	<0.59		1.98	2.24		ug/L		113	70 - 130
Bromacil	<0.098		1.98	2.32		ug/L		117	70 - 130
Butachlor	<0.049		1.98	2.41		ug/L		122	70 - 130

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 380-69264-V-1-A MS
Matrix: Water
Analysis Batch: 62512

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62312

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Butylbenzylphthalate	<0.49		1.98	2.33		ug/L		118	70 - 130
Chlorobenzilate	<0.098		1.98	2.20		ug/L		111	70 - 130
Chloroneb	<0.098		1.98	1.99		ug/L		101	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.098	^3+	1.98	2.09		ug/L		105	70 - 130
Chlorpyrifos	<0.049		1.98	2.34		ug/L		118	70 - 130
Chrysene	<0.020		1.98	1.94		ug/L		98	70 - 130
delta-BHC	<0.098		1.98	1.87		ug/L		95	70 - 130
Di(2-ethylhexyl)adipate	<0.59	F1	1.98	2.77	F1	ug/L		140	70 - 130
Dibenz(a,h)anthracene	<0.049		1.98	2.36		ug/L		119	70 - 130
Diclorvos (DDVP)	<0.049		1.98	1.97		ug/L		100	70 - 130
Dieldrin	<0.20		1.98	2.14		ug/L		108	70 - 130
Diethylphthalate	<0.49		1.98	1.96		ug/L		99	70 - 130
Dimethylphthalate	<0.49		1.98	1.92		ug/L		97	70 - 130
Di-n-butyl phthalate	<0.98		3.96	4.41		ug/L		111	70 - 130
Di-n-octyl phthalate	<0.098		1.98	1.91		ug/L		97	70 - 130
Endosulfan I (Alpha)	<0.098		1.98	2.08		ug/L		105	70 - 130
Endosulfan II (Beta)	<0.098		1.98	2.17		ug/L		110	70 - 130
Endosulfan sulfate	<0.098		1.98	2.30		ug/L		116	70 - 130
Endrin	<0.098		1.98	2.24		ug/L		113	70 - 130
Endrin aldehyde	<0.098		1.98	1.93		ug/L		98	70 - 130
EPTC	<0.098		1.98	2.14		ug/L		108	70 - 130
Fluoranthene	<0.098		1.98	2.18		ug/L		110	70 - 130
Fluorene	<0.049		1.98	2.06		ug/L		104	70 - 130
gamma-Chlordane	<0.049		1.98	2.56		ug/L		129	70 - 130
Heptachlor	<0.039		1.98	2.26		ug/L		114	70 - 130
Heptachlor epoxide (isomer B)	<0.049		1.98	2.54		ug/L		129	70 - 130
Hexachlorobenzene	<0.049		1.98	2.37		ug/L		120	70 - 130
Hexachlorocyclopentadiene	<0.049		1.98	1.98		ug/L		100	70 - 130
Indeno[1,2,3-cd]pyrene	<0.049		1.98	2.37		ug/L		120	70 - 130
Isophorone	<0.49		1.98	1.73		ug/L		87	70 - 130
Lindane	<0.039		1.98	1.99		ug/L		101	70 - 130
Malathion	<0.098		1.98	2.40		ug/L		121	70 - 130
Methoxychlor	<0.098		1.98	1.91		ug/L		96	70 - 130
Metolachlor	<0.049		1.98	2.10		ug/L		106	70 - 130
Molinate	<0.098		1.98	2.11		ug/L		107	70 - 130
Naphthalene	<0.30		1.98	1.84		ug/L		93	70 - 130
Parathion	<0.098		1.98	2.00		ug/L		101	70 - 130
Pendimethalin (Penoxaline)	<0.098		1.98	2.25		ug/L		114	70 - 130
Phenanthrene	<0.039		1.98	1.99		ug/L		100	70 - 130
Propachlor	<0.049		1.98	2.07		ug/L		105	70 - 130
Pyrene	<0.049		1.98	2.17		ug/L		110	70 - 130
Simazine	<0.049		1.98	2.25		ug/L		114	70 - 130
Terbacil	<0.098		1.98	2.06		ug/L		104	70 - 130
Terbuthylazine	<0.098		1.98	2.13		ug/L		108	70 - 130
Thiobencarb	<0.20		1.98	2.08		ug/L		105	70 - 130
trans-Nonachlor	<0.049		1.98	2.31		ug/L		116	70 - 130
Trifluralin	<0.098	F1	1.98	2.70	F1	ug/L		137	70 - 130

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 380-69264-V-1-A MS
Matrix: Water
Analysis Batch: 62512

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 62312

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Nitro-m-xylene	*93*		*70 - 130*
Perylene-d12	*103*		*70 - 130*
Triphenylphosphate	*117*		*70 - 130*

Lab Sample ID: 380-69269-AP-1-A DU
Matrix: Water
Analysis Batch: 62512

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 62312

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
1-Methylnaphthalene	<0.099			<0.099		ug/L				NC	20
2,4'-DDD	<0.099			<0.099		ug/L				NC	20
2,4'-DDE	<0.099			<0.099		ug/L				NC	20
2,4'-DDT	<0.099			<0.099		ug/L				NC	20
2,4-Dinitrotoluene	<0.099			<0.099		ug/L				NC	20
2,6-Dinitrotoluene	<0.099			<0.099		ug/L				NC	20
2-Methylnaphthalene	<0.099			<0.099		ug/L				NC	20
4,4'-DDD	<0.099			<0.099		ug/L				NC	20
4,4'-DDE	<0.099			<0.099		ug/L				NC	20
4,4'-DDT	<0.099			<0.099		ug/L				NC	20
Acenaphthene	<0.099			<0.099		ug/L				NC	20
Acenaphthylene	<0.099			<0.099		ug/L				NC	20
Acetochlor	<0.099			<0.099		ug/L				NC	20
Alachlor	<0.050			<0.050		ug/L				NC	20
alpha-BHC	<0.099			<0.099		ug/L				NC	20
alpha-Chlordane	<0.050			<0.050		ug/L				NC	20
Anthracene	<0.020			<0.020		ug/L				NC	20
Atrazine	<0.050			<0.050		ug/L				NC	20
Benz(a)anthracene	<0.050			<0.050		ug/L				NC	20
Benzo[a]pyrene	<0.020			<0.020		ug/L				NC	20
Benzo[b]fluoranthene	<0.020			<0.020		ug/L				NC	20
Benzo[g,h,i]perylene	<0.050			<0.050		ug/L				NC	20
Benzo[k]fluoranthene	<0.020			<0.020		ug/L				NC	20
beta-BHC	<0.099			<0.099		ug/L				NC	20
Bis(2-ethylhexyl) phthalate	<0.60			<0.60		ug/L				NC	20
Bromacil	<0.099			<0.099		ug/L				NC	20
Butachlor	<0.050			<0.050		ug/L				NC	20
Butylbenzylphthalate	<0.50			<0.50		ug/L				NC	20
Chlorobenzilate	<0.099			<0.099		ug/L				NC	20
Chloroneb	<0.099			<0.099		ug/L				NC	20
Chlorothalonil (Draconil, Bravo)	<0.099	^3+		<0.099		ug/L				NC	20
Chlorpyrifos	<0.050			<0.050		ug/L				NC	20
Chrysene	<0.020			<0.020		ug/L				NC	20
delta-BHC	<0.099			<0.099		ug/L				NC	20
Di(2-ethylhexyl)adipate	<0.60			<0.60		ug/L				NC	20
Dibenz(a,h)anthracene	<0.050			<0.050		ug/L				NC	20
Diclorvos (DDVP)	<0.050			<0.050		ug/L				NC	20
Dieldrin	<0.20			<0.20		ug/L				NC	20
Diethylphthalate	<0.50			<0.50		ug/L				NC	20

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 380-69269-AP-1-A DU
Matrix: Water
Analysis Batch: 62512

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 62312

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Dimethylphthalate	<0.50			<0.50		ug/L				NC	20
Di-n-butyl phthalate	<0.99			<0.99		ug/L				NC	20
Di-n-octyl phthalate	<0.099			<0.099		ug/L				NC	20
Endosulfan I (Alpha)	<0.099			<0.099		ug/L				NC	20
Endosulfan II (Beta)	<0.099			<0.099		ug/L				NC	20
Endosulfan sulfate	<0.099			<0.099		ug/L				NC	20
Endrin	<0.099			<0.099		ug/L				NC	20
Endrin aldehyde	<0.099			<0.099		ug/L				NC	20
EPTC	<0.099			<0.099		ug/L				NC	20
Fluoranthene	<0.099			<0.099		ug/L				NC	20
Fluorene	<0.050			<0.050		ug/L				NC	20
gamma-Chlordane	<0.050			<0.050		ug/L				NC	20
Heptachlor	<0.040			<0.040		ug/L				NC	20
Heptachlor epoxide (isomer B)	<0.050			<0.050		ug/L				NC	20
Hexachlorobenzene	<0.050			<0.050		ug/L				NC	20
Hexachlorocyclopentadiene	<0.050			<0.050		ug/L				NC	20
Indeno[1,2,3-cd]pyrene	<0.050			<0.050		ug/L				NC	20
Isophorone	<0.50			<0.50		ug/L				NC	20
Lindane	<0.040			<0.040		ug/L				NC	20
Malathion	<0.099			<0.099		ug/L				NC	20
Methoxychlor	<0.099			<0.099		ug/L				NC	20
Metolachlor	<0.050			<0.050		ug/L				NC	20
Molinate	<0.099			<0.099		ug/L				NC	20
Naphthalene	<0.30			<0.30		ug/L				NC	20
Parathion	<0.099			<0.099		ug/L				NC	20
Pendimethalin (Penoxaline)	<0.099			<0.099		ug/L				NC	20
Phenanthrene	<0.040			<0.040		ug/L				NC	20
Propachlor	<0.050			<0.050		ug/L				NC	20
Pyrene	<0.050			<0.050		ug/L				NC	20
Simazine	<0.050			<0.050		ug/L				NC	20
Terbacil	<0.099			<0.099		ug/L				NC	20
Terbuthylazine	<0.099			<0.099		ug/L				NC	20
Thiobencarb	<0.20			<0.20		ug/L				NC	20
Total Permethrin (mixed isomers)	<0.20			<0.20		ug/L				NC	20
trans-Nonachlor	<0.050			<0.050		ug/L				NC	20
Trifluralin	<0.099			<0.099		ug/L				NC	20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
2-Nitro-m-xylene	*95*		*70 - 130*
Perylene-d12	*97*		*70 - 130*
Triphenylphosphate	*114*		*70 - 130*

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

Lab Sample ID: MBL 380-63890/20-A
Matrix: Water
Analysis Batch: 64277

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63890

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		11/15/23 15:09	11/17/23 14:21	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
Perfluoroheptanoic acid (PFHpA)	0.395	J	2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0		ng/L		11/15/23 15:09	11/17/23 14:21	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*103*		*50 - 200*	*11/15/23 15:09*	*11/17/23 14:21*	*1*
13C6 PFDA	*105*		*50 - 200*	*11/15/23 15:09*	*11/17/23 14:21*	*1*
13C5 PFHxA	*113*		*50 - 200*	*11/15/23 15:09*	*11/17/23 14:21*	*1*
13C4 PFHpA	*108*		*50 - 200*	*11/15/23 15:09*	*11/17/23 14:21*	*1*
13C8 PFOA	*113*		*50 - 200*	*11/15/23 15:09*	*11/17/23 14:21*	*1*
13C9 PFNA	*117*		*50 - 200*	*11/15/23 15:09*	*11/17/23 14:21*	*1*
13C7 PFUnA	*107*		*50 - 200*	*11/15/23 15:09*	*11/17/23 14:21*	*1*
13C2 PFDoA	*111*		*50 - 200*	*11/15/23 15:09*	*11/17/23 14:21*	*1*
13C4 PFBA	*114*		*50 - 200*	*11/15/23 15:09*	*11/17/23 14:21*	*1*
13C5 PFPeA	*122*		*50 - 200*	*11/15/23 15:09*	*11/17/23 14:21*	*1*
13C3 PFBS	*108*		*50 - 200*	*11/15/23 15:09*	*11/17/23 14:21*	*1*
13C3 PFHxS	*108*		*50 - 200*	*11/15/23 15:09*	*11/17/23 14:21*	*1*

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

Lab Sample ID: MBL 380-63890/20-A
Matrix: Water
Analysis Batch: 64277

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63890

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	112		50 - 200	11/15/23 15:09	11/17/23 14:21	1
13C2-4:2-FTS	116		50 - 200	11/15/23 15:09	11/17/23 14:21	1
13C2-6:2-FTS	114		50 - 200	11/15/23 15:09	11/17/23 14:21	1
13C2-8:2-FTS	113		50 - 200	11/15/23 15:09	11/17/23 14:21	1

Lab Sample ID: LCS 380-63890/22-A
Matrix: Water
Analysis Batch: 64277

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63890

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	120	98.1		ng/L		81	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	103		ng/L		86	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	105		ng/L		87	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	109		ng/L		91	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	108		ng/L		90	70 - 130
Perfluorodecanoic acid (PFDA)	120	104		ng/L		87	70 - 130
Perfluorododecanoic acid (PFDoA)	120	102		ng/L		84	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	103		ng/L		85	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	106		ng/L		88	70 - 130
Perfluorohexanoic acid (PFHxA)	120	107		ng/L		89	70 - 130
Perfluorononanoic acid (PFNA)	120	106		ng/L		88	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	108		ng/L		89	70 - 130
Perfluorooctanoic acid (PFOA)	120	107		ng/L		89	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	104		ng/L		87	70 - 130
Perfluorobutanoic acid (PFBA)	120	102		ng/L		85	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	114		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	97.4		ng/L		81	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	106		ng/L		88	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	102		ng/L		85	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	106		ng/L		88	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	105		ng/L		87	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	110		ng/L		91	70 - 130
Perfluoropentanoic acid (PFPeA)	120	105		ng/L		87	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	106		ng/L		88	70 - 130

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

Lab Sample ID: LCS 380-63890/22-A
Matrix: Water
Analysis Batch: 64277

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63890

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluoropentanesulfonic acid (PFPeS)			120	104		ng/L		87	70 - 130		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*116*		*50 - 200*
13C6 PFDA	*118*		*50 - 200*
13C5 PFHxA	*122*		*50 - 200*
13C4 PFHpA	*117*		*50 - 200*
13C8 PFOA	*114*		*50 - 200*
13C9 PFNA	*115*		*50 - 200*
13C7 PFUnA	*113*		*50 - 200*
13C2 PFDoA	*117*		*50 - 200*
13C4 PFBA	*118*		*50 - 200*
13C5 PFPeA	*119*		*50 - 200*
13C3 PFBS	*109*		*50 - 200*
13C3 PFHxS	*110*		*50 - 200*
13C8 PFOS	*111*		*50 - 200*
13C2-4:2-FTS	*115*		*50 - 200*
13C2-6:2-FTS	*108*		*50 - 200*
13C2-8:2-FTS	*109*		*50 - 200*

Lab Sample ID: LCSD 380-63890/23-A
Matrix: Water
Analysis Batch: 64277

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 63890

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			120	106		ng/L		88	70 - 130	8	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			120	114		ng/L		94	70 - 130	9	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			120	117		ng/L		98	70 - 130	11	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			120	108		ng/L		90	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)			120	116		ng/L		97	70 - 130	7	30
Perfluorodecanoic acid (PFDA)			120	111		ng/L		93	70 - 130	6	30
Perfluorododecanoic acid (PFDoA)			120	109		ng/L		91	70 - 130	7	30
Perfluoroheptanoic acid (PFHpA)			120	115		ng/L		96	70 - 130	11	30
Perfluorohexanesulfonic acid (PFHxS)			120	114		ng/L		95	70 - 130	7	30
Perfluorohexanoic acid (PFHxA)			120	113		ng/L		94	70 - 130	5	30
Perfluorononanoic acid (PFNA)			120	108		ng/L		90	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)			120	113		ng/L		94	70 - 130	5	30
Perfluorooctanoic acid (PFOA)			120	113		ng/L		94	70 - 130	6	30
Perfluoroundecanoic acid (PFUnA)			120	112		ng/L		93	70 - 130	7	30
Perfluorobutanoic acid (PFBA)			120	115		ng/L		95	70 - 130	11	30

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

Lab Sample ID: LCSD 380-63890/23-A
Matrix: Water
Analysis Batch: 64277

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 63890

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)			120	115		ng/L		96	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)			120	108		ng/L		90	70 - 130	10	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)			120	114		ng/L		95	70 - 130	8	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)			120	119		ng/L		99	70 - 130	15	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)			120	109		ng/L		90	70 - 130	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)			120	109		ng/L		91	70 - 130	3	30
Perfluoro-4-methoxybutanoic acid (PFMBA)			120	118		ng/L		98	70 - 130	7	30
Perfluoropentanoic acid (PFPeA)			120	113		ng/L		94	70 - 130	7	30
Perfluoroheptanesulfonic acid (PFHpS)			120	113		ng/L		94	70 - 130	7	30
Perfluoropentanesulfonic acid (PFPeS)			120	116		ng/L		97	70 - 130	11	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*116*		*50 - 200*
13C6 PFDA	*115*		*50 - 200*
13C5 PFHxA	*115*		*50 - 200*
13C4 PFHpA	*110*		*50 - 200*
13C8 PFOA	*112*		*50 - 200*
13C9 PFNA	*118*		*50 - 200*
13C7 PFUnA	*116*		*50 - 200*
13C2 PFDoA	*118*		*50 - 200*
13C4 PFBA	*110*		*50 - 200*
13C5 PFPeA	*114*		*50 - 200*
13C3 PFBS	*114*		*50 - 200*
13C3 PFHxS	*111*		*50 - 200*
13C8 PFOS	*113*		*50 - 200*
13C2-4:2-FTS	*119*		*50 - 200*
13C2-6:2-FTS	*112*		*50 - 200*
13C2-8:2-FTS	*118*		*50 - 200*

Lab Sample ID: MRL 380-63890/21-A
Matrix: Water
Analysis Batch: 64277

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63890

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			2.00	1.80	J	ng/L		90	50 - 150		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			2.00	1.97	J	ng/L		98	50 - 150		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			2.00	1.95	J	ng/L		97	50 - 150		

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

Lab Sample ID: MRL 380-63890/21-A
Matrix: Water
Analysis Batch: 64277

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63890

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.99	J	ng/L		99	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.92	J	ng/L		96	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	1.94	J	ng/L		97	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.20	J	ng/L		110	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.13	J	ng/L		106	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	1.93	J	ng/L		96	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.11	J	ng/L		105	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.00	J	ng/L		100	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.15	J	ng/L		107	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.39	J	ng/L		120	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.11	J	ng/L		105	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.16	J	ng/L		108	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.10	J	ng/L		105	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.02	J	ng/L		101	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.28	J	ng/L		114	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	1.90	J	ng/L		95	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.00	1.95	J	ng/L		98	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	1.86	J	ng/L		93	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	2.00	J	ng/L		100	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.05	J	ng/L		102	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	2.07	J	ng/L		104	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	1.93	J	ng/L		96	50 - 150

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C3 HFPO-DA	*104*		*50 - 200*
13C6 PFDA	*115*		*50 - 200*
13C5 PFHxA	*110*		*50 - 200*
13C4 PFHpA	*110*		*50 - 200*
13C8 PFOA	*113*		*50 - 200*
13C9 PFNA	*119*		*50 - 200*
13C7 PFUnA	*111*		*50 - 200*
13C2 PFDoA	*114*		*50 - 200*
13C4 PFBA	*106*		*50 - 200*
13C5 PFPeA	*107*		*50 - 200*
13C3 PFBS	*111*		*50 - 200*
13C3 PFHxS	*111*		*50 - 200*
13C8 PFOS	*110*		*50 - 200*

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

Lab Sample ID: MRL 380-63890/21-A
Matrix: Water
Analysis Batch: 64277

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63890

Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits
13C2-4:2-FTS	122		50 - 200
13C2-6:2-FTS	113		50 - 200
13C2-8:2-FTS	123		50 - 200

Lab Sample ID: 380-69290-4 LMS
Matrix: Drinking Water
Analysis Batch: 64277

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
Prep Type: Total/NA
Prep Batch: 63890

Analyte	Sample Result	Sample Qualifier	Spike Added	LMS Result	LMS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.00	1.67	J	ng/L		83	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.00	1.83	J	ng/L		91	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.00	2.00		ng/L		100	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.00	2.05		ng/L		102	50 - 150
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.00	3.34		ng/L		95	50 - 150
Perfluorodecanoic acid (PFDA)	<2.0		2.00	2.03		ng/L		101	50 - 150
Perfluorododecanoic acid (PFDoA)	<2.0		2.00	2.08		ng/L		104	50 - 150
Perfluoroheptanoic acid (PFHpA)	<2.0		2.00	3.30		ng/L		106	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.4		2.00	4.71		ng/L		116	50 - 150
Perfluorohexanoic acid (PFHxA)	2.3		2.00	4.34		ng/L		100	50 - 150
Perfluorononanoic acid (PFNA)	<2.0		2.00	2.22		ng/L		111	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.5		2.00	4.21		ng/L		84	50 - 150
Perfluorooctanoic acid (PFOA)	2.4		2.00	4.63		ng/L		112	50 - 150
Perfluoroundecanoic acid (PFUnA)	<2.0		2.00	2.09		ng/L		105	50 - 150
Perfluorobutanoic acid (PFBA)	<2.0		2.00	3.05		ng/L		103	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.00	2.18		ng/L		109	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.00	2.28		ng/L		114	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.00	2.23		ng/L		111	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.00	1.87	J	ng/L		94	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.00	2.01		ng/L		101	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.00	1.98	J	ng/L		99	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.00	2.06		ng/L		103	50 - 150
Perfluoropentanoic acid (PFPeA)	2.4		2.00	5.08		ng/L		136	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.00	2.43		ng/L		102	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.00	2.36		ng/L		118	50 - 150

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

Isotope Dilution	LMS %Recovery	LMS Qualifier	Limits
13C3 HFPO-DA	82		50 - 200
13C6 PFDA	93		50 - 200
13C5 PFHxA	90		50 - 200
13C4 PFHpA	91		50 - 200
13C8 PFOA	89		50 - 200
13C9 PFNA	101		50 - 200
13C7 PFUnA	99		50 - 200
13C2 PFDoA	108		50 - 200
13C4 PFBA	93		50 - 200
13C5 PFPeA	96		50 - 200
13C3 PFBS	111		50 - 200
13C3 PFHxS	111		50 - 200
13C8 PFOS	117		50 - 200
13C2-4:2-FTS	116		50 - 200
13C2-6:2-FTS	115		50 - 200
13C2-8:2-FTS	137		50 - 200

Lab Sample ID: 380-69290-4 LMSD — **Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1**
Matrix: Drinking Water — **Prep Type: Total/NA**
Analysis Batch: 64277 — **Prep Batch: 63890**

Analyte	Sample Result	Sample Qualifier	Spike Added	LMSD Result	LMSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.01	1.63	J	ng/L		81	50 - 150	2	50
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.01	1.74	J	ng/L		87	50 - 150	5	50
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.01	1.75	J	ng/L		87	50 - 150	13	50
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.01	1.91	J	ng/L		95	50 - 150	7	50
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.01	2.97		ng/L		77	50 - 150	12	50
Perfluorodecanoic acid (PFDA)	<2.0		2.01	1.87	J	ng/L		93	50 - 150	8	50
Perfluorododecanoic acid (PFDoA)	<2.0		2.01	2.22		ng/L		110	50 - 150	6	50
Perfluoroheptanoic acid (PFHpA)	<2.0		2.01	3.16		ng/L		99	50 - 150	4	50
Perfluorohexanesulfonic acid (PFHxS)	2.4		2.01	4.76		ng/L		119	50 - 150	1	50
Perfluorohexanoic acid (PFHxA)	2.3		2.01	4.28		ng/L		97	50 - 150	1	50
Perfluorononanoic acid (PFNA)	<2.0		2.01	2.05		ng/L		102	50 - 150	8	50
Perfluorooctanesulfonic acid (PFOS)	2.5		2.01	4.31		ng/L		89	50 - 150	2	50
Perfluorooctanoic acid (PFOA)	2.4		2.01	4.21		ng/L		91	50 - 150	9	50
Perfluoroundecanoic acid (PFUnA)	<2.0		2.01	1.94	J	ng/L		97	50 - 150	8	50
Perfluorobutanoic acid (PFBA)	<2.0		2.01	2.87		ng/L		94	50 - 150	6	50
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.01	1.96	J	ng/L		98	50 - 150	11	50
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.01	1.96	J	ng/L		98	50 - 150	15	50
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.01	2.22		ng/L		110	50 - 150	1	50

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

Lab Sample ID: 380-69290-4 LMSD
Matrix: Drinking Water
Analysis Batch: 64277

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1
Prep Type: Total/NA
Prep Batch: 63890

Analyte	Sample Result	Sample Qualifier	Spike Added	LMSD Result	LMSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.01	1.69	J	ng/L		84	50 - 150	10	50
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.01	1.81	J	ng/L		90	50 - 150	11	50
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.01	1.80	J	ng/L		89	50 - 150	10	50
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.01	1.76	J	ng/L		88	50 - 150	15	50
Perfluoropentanoic acid (PFPeA)	2.4		2.01	4.05		ng/L		84	50 - 150	22	50
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.01	2.29		ng/L		95	50 - 150	6	50
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.01	2.30		ng/L		115	50 - 150	2	50

Isotope Dilution	*LMSD %Recovery*	*LMSD Qualifier*	*Limits*
13C3 HFPO-DA	*72*		*50 - 200*
13C6 PFDA	*97*		*50 - 200*
13C5 PFHxA	*81*		*50 - 200*
13C4 PFHpA	*83*		*50 - 200*
13C8 PFOA	*89*		*50 - 200*
13C9 PFNA	*104*		*50 - 200*
13C7 PFUnA	*98*		*50 - 200*
13C2 PFDoA	*105*		*50 - 200*
13C4 PFBA	*79*		*50 - 200*
13C5 PFPeA	*81*		*50 - 200*
13C3 PFBS	*108*		*50 - 200*
13C3 PFHxS	*105*		*50 - 200*
13C8 PFOS	*109*		*50 - 200*
13C2-4:2-FTS	*124*		*50 - 200*
13C2-6:2-FTS	*126*		*50 - 200*
13C2-8:2-FTS	*131*		*50 - 200*

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

Lab Sample ID: MBL 380-63219/23-A
Matrix: Water
Analysis Batch: 63567

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63219

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		11/09/23 10:46	11/13/23 13:14	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		11/09/23 10:46	11/13/23 13:14	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		11/09/23 10:46	11/13/23 13:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0		ng/L		11/09/23 10:46	11/13/23 13:14	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0		ng/L		11/09/23 10:46	11/13/23 13:14	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		11/09/23 10:46	11/13/23 13:14	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		11/09/23 10:46	11/13/23 13:14	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		11/09/23 10:46	11/13/23 13:14	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		11/09/23 10:46	11/13/23 13:14	1

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

Lab Sample ID: MBL 380-63219/23-A
Matrix: Water
Analysis Batch: 63567

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 63219

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		11/09/23 10:46	11/13/23 13:14	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		11/09/23 10:46	11/13/23 13:14	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		11/09/23 10:46	11/13/23 13:14	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		11/09/23 10:46	11/13/23 13:14	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0		ng/L		11/09/23 10:46	11/13/23 13:14	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0		ng/L		11/09/23 10:46	11/13/23 13:14	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		11/09/23 10:46	11/13/23 13:14	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		11/09/23 10:46	11/13/23 13:14	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		11/09/23 10:46	11/13/23 13:14	1

Surrogate	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*88*		*70 - 130*	*11/09/23 10:46*	*11/13/23 13:14*	*1*
13C2 PFHxA	*104*		*70 - 130*	*11/09/23 10:46*	*11/13/23 13:14*	*1*
13C2 PFDA	*92*		*70 - 130*	*11/09/23 10:46*	*11/13/23 13:14*	*1*
13C3-GenX	*95*		*70 - 130*	*11/09/23 10:46*	*11/13/23 13:14*	*1*

Lab Sample ID: LCS 380-63219/25-A
Matrix: Water
Analysis Batch: 63567

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63219

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.1	18.4		ng/L		73	70 - 130
Perfluorooctanesulfonic acid (PFOS)	23.2	17.7		ng/L		76	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.1	18.3		ng/L		73	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.1	18.4		ng/L		73	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.1	18.3		ng/L		73	70 - 130
Perfluorohexanoic acid (PFHxA)	25.1	19.2		ng/L		77	70 - 130
Perfluorododecanoic acid (PFDoA)	25.1	17.7		ng/L		71	70 - 130
Perfluorooctanoic acid (PFOA)	25.1	19.9		ng/L		80	70 - 130
Perfluorodecanoic acid (PFDA)	25.1	19.4		ng/L		78	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	22.9	18.0		ng/L		79	70 - 130
Perfluorobutanesulfonic acid (PFBS)	22.2	16.9		ng/L		76	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.1	20.3		ng/L		81	70 - 130
Perfluorononanoic acid (PFNA)	25.1	18.9		ng/L		76	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.1	19.0		ng/L		76	70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.1	18.0		ng/L		72	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	23.4	17.4		ng/L		74	70 - 130

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

Lab Sample ID: LCS 380-63219/25-A
Matrix: Water
Analysis Batch: 63567

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63219

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			23.7	17.0		ng/L		72	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			23.7	17.9		ng/L		76	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
d5-NEtFOSAA	*100*		*70 - 130*
13C2 PFHxA	*114*		*70 - 130*
13C2 PFDA	*108*		*70 - 130*
13C3-GenX	*110*		*70 - 130*

Lab Sample ID: LCSD 380-63219/26-A
Matrix: Water
Analysis Batch: 63567

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 63219

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			25.1	21.4		ng/L		86	70 - 130	15	30
Perfluorooctanesulfonic acid (PFOS)			23.2	20.3		ng/L		87	70 - 130	14	30
Perfluoroundecanoic acid (PFUnA)			25.1	21.6		ng/L		86	70 - 130	16	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			25.1	21.1		ng/L		84	70 - 130	14	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			25.1	20.8		ng/L		83	70 - 130	13	30
Perfluorohexanoic acid (PFHxA)			25.1	22.2		ng/L		89	70 - 130	14	30
Perfluorododecanoic acid (PFDoA)			25.1	20.4		ng/L		82	70 - 130	14	30
Perfluorooctanoic acid (PFOA)			25.1	22.4		ng/L		89	70 - 130	12	30
Perfluorodecanoic acid (PFDA)			25.1	22.8		ng/L		91	70 - 130	16	30
Perfluorohexanesulfonic acid (PFHxS)			22.9	20.1		ng/L		88	70 - 130	11	30
Perfluorobutanesulfonic acid (PFBS)			22.2	19.1		ng/L		86	70 - 130	12	30
Perfluoroheptanoic acid (PFHpA)			25.1	22.3		ng/L		89	70 - 130	10	30
Perfluorononanoic acid (PFNA)			25.1	21.8		ng/L		87	70 - 130	14	30
Perfluorotetradecanoic acid (PFTA)			25.1	22.3		ng/L		89	70 - 130	16	30
Perfluorotridecanoic acid (PFTrDA)			25.1	20.7		ng/L		83	70 - 130	14	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			23.4	20.2		ng/L		86	70 - 130	15	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			23.7	19.0		ng/L		80	70 - 130	11	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			23.7	20.1		ng/L		85	70 - 130	11	30

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

Lab Sample ID: LCSD 380-63219/26-A
Matrix: Water
Analysis Batch: 63567

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 63219

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
d5-NEtFOSAA	99		70 - 130
13C2 PFHxA	111		70 - 130
13C2 PFDA	110		70 - 130
13C3-GenX	103		70 - 130

Lab Sample ID: MRL 380-63219/24-A
Matrix: Water
Analysis Batch: 63567

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 63219

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.75	J	ng/L		88	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.86	1.68	J	ng/L		90	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	1.83	J	ng/L		91	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	1.86	J	ng/L		93	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	1.67	J	ng/L		83	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.83	J	ng/L		91	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	1.73	J	ng/L		86	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.27	J	ng/L		113	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.02	J	ng/L		101	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.83	1.67	J	ng/L		91	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.77	1.64	J	ng/L		92	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	1.89	J	ng/L		94	50 - 150
Perfluorononanoic acid (PFNA)	2.00	1.96	J	ng/L		98	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.11	J	ng/L		105	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	1.77	J	ng/L		88	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	1.87	1.66	J	ng/L		89	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.89	1.58	J	ng/L		83	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.89	1.70	J	ng/L		90	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	94		70 - 130
13C2 PFHxA	106		70 - 130
13C2 PFDA	99		70 - 130
13C3-GenX	101		70 - 130

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

Lab Sample ID: 380-69290-1 MS
Matrix: Drinking Water
Analysis Batch: 63567

Client Sample ID: MOANALUA WELLS
Prep Type: Total/NA
Prep Batch: 63219

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		2.01	<2.0		ng/L		90	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		1.86	3.16		ng/L		99	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		2.01	<2.0		ng/L		89	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.01	<2.0		ng/L		91	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.01	<2.0		ng/L		95	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		2.01	2.92		ng/L		97	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		2.01	<2.0		ng/L		86	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		2.01	2.57		ng/L		93	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		2.01	<2.0		ng/L		95	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		1.84	2.64		ng/L		83	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		1.78	2.12		ng/L		93	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		2.01	2.36		ng/L		90	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		2.01	2.00		ng/L		99	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		2.01	2.27		ng/L		113	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.01	<2.0		ng/L		93	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		1.88	<2.0		ng/L		89	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		1.90	<2.0		ng/L		83	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		1.90	<2.0		ng/L		97	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
d5-NEtFOSAA	*106*		*70 - 130*
13C2 PFHxA	*109*		*70 - 130*
13C2 PFDA	*106*		*70 - 130*
13C3-GenX	*104*		*70 - 130*

Lab Sample ID: 380-69290-1 MSD
Matrix: Drinking Water
Analysis Batch: 63567

Client Sample ID: MOANALUA WELLS
Prep Type: Total/NA
Prep Batch: 63219

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		2.01	<2.0		ng/L		94	70 - 130	4	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		1.86	3.21		ng/L		102	70 - 130	2	30
Perfluoroundecanoic acid (PFUnA)	<2.0		2.01	<2.0		ng/L		93	70 - 130	4	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.01	<2.0		ng/L		91	70 - 130	1	30

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

Job ID: 380-69290-1

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

Lab Sample ID: 380-69290-1 MSD
Matrix: Drinking Water
Analysis Batch: 63567

Client Sample ID: MOANALUA WELLS
Prep Type: Total/NA
Prep Batch: 63219

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.01	<2.0		ng/L		97	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		2.01	3.02		ng/L		103	70 - 130	4	30
Perfluorododecanoic acid (PFDoA)	<2.0		2.01	<2.0		ng/L		90	70 - 130	4	30
Perfluorooctanoic acid (PFOA)	<2.0		2.01	2.75		ng/L		102	70 - 130	7	30
Perfluorodecanoic acid (PFDA)	<2.0		2.01	<2.0		ng/L		99	70 - 130	4	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		1.83	2.90		ng/L		97	70 - 130	10	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		1.78	2.31		ng/L		105	70 - 130	9	30
Perfluoroheptanoic acid (PFHpA)	<2.0		2.01	2.49		ng/L		97	70 - 130	5	30
Perfluorononanoic acid (PFNA)	<2.0		2.01	<2.0		ng/L		99	70 - 130	0	30
Perfluorotetradecanoic acid (PFTA)	<2.0		2.01	2.26		ng/L		113	70 - 130	0	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.01	<2.0		ng/L		97	70 - 130	4	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		1.88	<2.0		ng/L		92	70 - 130	3	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		1.90	<2.0		ng/L		88	70 - 130	5	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		1.90	<2.0		ng/L		101	70 - 130	4	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
d5-NEtFOSAA	*101*		*70 - 130*
13C2 PFHxA	*102*		*70 - 130*
13C2 PFDA	*106*		*70 - 130*
13C3-GenX	*100*		*70 - 130*

GC/MS Semi VOA

Prep Batch: 62312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-69290-1	MOANALUA WELLS	Total/NA	Drinking Water	525.2	
380-69290-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	
380-69290-3	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	525.2	
380-69290-4	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	525.2	
MB 380-62312/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-62312/23-A	Lab Control Sample	Total/NA	Water	525.2	
MRL 380-62312/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-69264-V-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-69269-AP-1-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 62512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-69290-1	MOANALUA WELLS	Total/NA	Drinking Water	525.2	62312
380-69290-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	62312
380-69290-3	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	525.2	62312
380-69290-4	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	525.2	62312
MB 380-62312/21-A	Method Blank	Total/NA	Water	525.2	62312
LCS 380-62312/23-A	Lab Control Sample	Total/NA	Water	525.2	62312
MRL 380-62312/22-A	Lab Control Sample	Total/NA	Water	525.2	62312
380-69264-V-1-A MS	Matrix Spike	Total/NA	Water	525.2	62312
380-69269-AP-1-A DU	Duplicate	Total/NA	Water	525.2	62312

LCMS

Prep Batch: 63219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-69290-1	MOANALUA WELLS	Total/NA	Drinking Water	537.1 DW	
380-69290-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	537.1 DW	
380-69290-3	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	537.1 DW	
380-69290-4	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	537.1 DW	
380-69290-9	FB MOANALUA WELLS	Total/NA	Water	537.1 DW	
380-69290-10	FB AIEA GULCH WELLS PUMP 2	Total/NA	Water	537.1 DW	
380-69290-11	FB AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Water	537.1 DW	
380-69290-12	FB HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	537.1 DW	
MBL 380-63219/23-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-63219/25-A	Lab Control Sample	Total/NA	Water	537.1 DW	
LCSD 380-63219/26-A	Lab Control Sample Dup	Total/NA	Water	537.1 DW	
MRL 380-63219/24-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-69290-1 MS	MOANALUA WELLS	Total/NA	Drinking Water	537.1 DW	
380-69290-1 MSD	MOANALUA WELLS	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 63567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-69290-1	MOANALUA WELLS	Total/NA	Drinking Water	537.1	63219
380-69290-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	537.1	63219
380-69290-3	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	537.1	63219
380-69290-4	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	537.1	63219
380-69290-9	FB MOANALUA WELLS	Total/NA	Water	537.1	63219
380-69290-10	FB AIEA GULCH WELLS PUMP 2	Total/NA	Water	537.1	63219
380-69290-11	FB AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Water	537.1	63219
380-69290-12	FB HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	537.1	63219

LCMS (Continued)

Analysis Batch: 63567 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MBL 380-63219/23-A	Method Blank	Total/NA	Water	537.1	63219
LCS 380-63219/25-A	Lab Control Sample	Total/NA	Water	537.1	63219
LCSD 380-63219/26-A	Lab Control Sample Dup	Total/NA	Water	537.1	63219
MRL 380-63219/24-A	Lab Control Sample	Total/NA	Water	537.1	63219
380-69290-1 MS	MOANALUA WELLS	Total/NA	Drinking Water	537.1	63219
380-69290-1 MSD	MOANALUA WELLS	Total/NA	Drinking Water	537.1	63219

Prep Batch: 63890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-69290-1	MOANALUA WELLS	Total/NA	Drinking Water	533	
380-69290-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	533	
380-69290-3	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	533	
380-69290-4	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	533	
380-69290-9	FB MOANALUA WELLS	Total/NA	Water	533	
380-69290-10	FB AIEA GULCH WELLS PUMP 2	Total/NA	Water	533	
380-69290-11	FB AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Water	533	
380-69290-12	FB HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	533	
MBL 380-63890/20-A	Method Blank	Total/NA	Water	533	
LCS 380-63890/22-A	Lab Control Sample	Total/NA	Water	533	
LCSD 380-63890/23-A	Lab Control Sample Dup	Total/NA	Water	533	
MRL 380-63890/21-A	Lab Control Sample	Total/NA	Water	533	
380-69290-4 LMS	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	533	
380-69290-4 LMSD	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	533	

Analysis Batch: 64277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-69290-1	MOANALUA WELLS	Total/NA	Drinking Water	533	63890
380-69290-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	533	63890
380-69290-3	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	533	63890
380-69290-4	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	533	63890
380-69290-9	FB MOANALUA WELLS	Total/NA	Water	533	63890
380-69290-10	FB AIEA GULCH WELLS PUMP 2	Total/NA	Water	533	63890
380-69290-11	FB AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Water	533	63890
380-69290-12	FB HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	533	63890
MBL 380-63890/20-A	Method Blank	Total/NA	Water	533	63890
LCS 380-63890/22-A	Lab Control Sample	Total/NA	Water	533	63890
LCSD 380-63890/23-A	Lab Control Sample Dup	Total/NA	Water	533	63890
MRL 380-63890/21-A	Lab Control Sample	Total/NA	Water	533	63890
380-69290-4 LMS	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	533	63890
380-69290-4 LMSD	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	533	63890

Lab Chronicle

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

Job ID: 380-69290-1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-69290-1
Matrix: Drinking Water
Date Collected: 10/30/23 09:56
Date Received: 11/01/23 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			62312	OTM3	EA POM	11/03/23 14:36
Total/NA	Analysis	525.2		1	62512	Q8LA	EA POM	11/05/23 16:26
Total/NA	Prep	533			63890	T2EP	EA POM	11/15/23 15:09
Total/NA	Analysis	533		1	64277	UKDT	EA POM	11/17/23 17:03
Total/NA	Prep	537.1 DW			63219	SL5Q	EA POM	11/09/23 10:46
Total/NA	Analysis	537.1		1	63567	R6YA	EA POM	11/13/23 13:53

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-69290-2
Matrix: Drinking Water
Date Collected: 10/30/23 11:09
Date Received: 11/01/23 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			62312	OTM3	EA POM	11/03/23 14:36
Total/NA	Analysis	525.2		1	62512	Q8LA	EA POM	11/05/23 16:46
Total/NA	Prep	533			63890	T2EP	EA POM	11/15/23 15:09
Total/NA	Analysis	533		1	64277	UKDT	EA POM	11/17/23 17:13
Total/NA	Prep	537.1 DW			63219	SL5Q	EA POM	11/09/23 10:46
Total/NA	Analysis	537.1		1	63567	R6YA	EA POM	11/13/23 14:21

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-69290-3
Matrix: Drinking Water
Date Collected: 10/30/23 11:44
Date Received: 11/01/23 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			62312	OTM3	EA POM	11/03/23 14:36
Total/NA	Analysis	525.2		1	62512	Q8LA	EA POM	11/05/23 17:06
Total/NA	Prep	533			63890	T2EP	EA POM	11/15/23 15:09
Total/NA	Analysis	533		1	64277	UKDT	EA POM	11/17/23 17:23
Total/NA	Prep	537.1 DW			63219	SL5Q	EA POM	11/09/23 10:46
Total/NA	Analysis	537.1		1	63567	R6YA	EA POM	11/13/23 14:30

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-69290-4
Matrix: Drinking Water
Date Collected: 10/30/23 10:37
Date Received: 11/01/23 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			62312	OTM3	EA POM	11/03/23 14:36
Total/NA	Analysis	525.2		1	62512	Q8LA	EA POM	11/05/23 17:25
Total/NA	Prep	533			63890	T2EP	EA POM	11/15/23 15:09
Total/NA	Analysis	533		1	64277	UKDT	EA POM	11/17/23 15:00
Total/NA	Prep	537.1 DW			63219	SL5Q	EA POM	11/09/23 10:46
Total/NA	Analysis	537.1		1	63567	R6YA	EA POM	11/13/23 14:40

Lab Chronicle

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

Job ID: 380-69290-1

Client Sample ID: FB MOANALUA WELLS
Lab Sample ID: 380-69290-9
Date Collected: 10/30/23 09:56
Matrix: Water
Date Received: 11/01/23 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			63890	T2EP	EA POM	11/15/23 15:09
Total/NA	Analysis	533		1	64277	UKDT	EA POM	11/17/23 17:32
Total/NA	Prep	537.1 DW			63219	SL5Q	EA POM	11/09/23 10:46
Total/NA	Analysis	537.1		1	63567	R6YA	EA POM	11/13/23 14:49

Client Sample ID: FB AIEA GULCH WELLS PUMP 2
Lab Sample ID: 380-69290-10
Date Collected: 10/30/23 11:09
Matrix: Water
Date Received: 11/01/23 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			63890	T2EP	EA POM	11/15/23 15:09
Total/NA	Analysis	533		1	64277	UKDT	EA POM	11/17/23 17:41
Total/NA	Prep	537.1 DW			63219	SL5Q	EA POM	11/09/23 10:46
Total/NA	Analysis	537.1		1	63567	R6YA	EA POM	11/13/23 14:58

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260) P2
Lab Sample ID: 380-69290-11
Date Collected: 10/30/23 11:44
Matrix: Water
Date Received: 11/01/23 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			63890	T2EP	EA POM	11/15/23 15:09
Total/NA	Analysis	533		1	64277	UKDT	EA POM	11/17/23 17:51
Total/NA	Prep	537.1 DW			63219	SL5Q	EA POM	11/09/23 10:46
Total/NA	Analysis	537.1		1	63567	R6YA	EA POM	11/13/23 15:08

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2 P1
Lab Sample ID: 380-69290-12
Date Collected: 10/30/23 10:37
Matrix: Water
Date Received: 11/01/23 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			63890	T2EP	EA POM	11/15/23 15:09
Total/NA	Analysis	533		1	64277	UKDT	EA POM	11/17/23 18:00
Total/NA	Prep	537.1 DW			63219	SL5Q	EA POM	11/09/23 10:46
Total/NA	Analysis	537.1		1	63567	R6YA	EA POM	11/13/23 15:17

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

Accreditation/Certification Summary

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

Job ID: 380-69290-1

Laboratory: Eurofins Eaton Analytical Pomona

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	01-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Drinking Water	1-Methylnaphthalene
525.2	525.2	Drinking Water	2,4'-DDD
525.2	525.2	Drinking Water	2,4'-DDE
525.2	525.2	Drinking Water	2,4'-DDT
525.2	525.2	Drinking Water	2,4-Dinitrotoluene
525.2	525.2	Drinking Water	2,6-Dinitrotoluene
525.2	525.2	Drinking Water	2-Methylnaphthalene
525.2	525.2	Drinking Water	4,4'-DDD
525.2	525.2	Drinking Water	4,4'-DDE
525.2	525.2	Drinking Water	4,4'-DDT
525.2	525.2	Drinking Water	Acenaphthene
525.2	525.2	Drinking Water	Acenaphthylene
525.2	525.2	Drinking Water	Acetochlor
525.2	525.2	Drinking Water	alpha-BHC
525.2	525.2	Drinking Water	alpha-Chlordane
525.2	525.2	Drinking Water	Anthracene
525.2	525.2	Drinking Water	Benz(a)anthracene
525.2	525.2	Drinking Water	Benzo[b]fluoranthene
525.2	525.2	Drinking Water	Benzo[g,h,i]perylene
525.2	525.2	Drinking Water	Benzo[k]fluoranthene
525.2	525.2	Drinking Water	beta-BHC
525.2	525.2	Drinking Water	Bromacil
525.2	525.2	Drinking Water	Butylbenzylphthalate
525.2	525.2	Drinking Water	Chlorobenzilate
525.2	525.2	Drinking Water	Chloroneb
525.2	525.2	Drinking Water	Chlorothalonil (Draconil, Bravo)
525.2	525.2	Drinking Water	Chlorpyrifos
525.2	525.2	Drinking Water	Chrysene
525.2	525.2	Drinking Water	delta-BHC
525.2	525.2	Drinking Water	Dibenz(a,h)anthracene
525.2	525.2	Drinking Water	Diclorvos (DDVP)
525.2	525.2	Drinking Water	Diethylphthalate
525.2	525.2	Drinking Water	Dimethylphthalate
525.2	525.2	Drinking Water	Di-n-butyl phthalate
525.2	525.2	Drinking Water	Di-n-octyl phthalate
525.2	525.2	Drinking Water	Endosulfan I (Alpha)
525.2	525.2	Drinking Water	Endosulfan II (Beta)
525.2	525.2	Drinking Water	Endosulfan sulfate
525.2	525.2	Drinking Water	Endrin aldehyde
525.2	525.2	Drinking Water	EPTC
525.2	525.2	Drinking Water	Fluoranthene
525.2	525.2	Drinking Water	Fluorene
525.2	525.2	Drinking Water	gamma-Chlordane
525.2	525.2	Drinking Water	Indeno[1,2,3-cd]pyrene
525.2	525.2	Drinking Water	Isophorone

Laboratory: Eurofins Eaton Analytical Pomona (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Drinking Water	Malathion
525.2	525.2	Drinking Water	Molinate
525.2	525.2	Drinking Water	Naphthalene
525.2	525.2	Drinking Water	Parathion
525.2	525.2	Drinking Water	Pendimethalin (Penoxaline)
525.2	525.2	Drinking Water	Phenanthrene
525.2	525.2	Drinking Water	Pyrene
525.2	525.2	Drinking Water	Terbacil
525.2	525.2	Drinking Water	Terbuthylazine
525.2	525.2	Drinking Water	Thiobencarb
525.2	525.2	Drinking Water	Total Permethrin (mixed isomers)
525.2	525.2	Drinking Water	trans-Nonachlor
525.2	525.2	Drinking Water	Trifluralin
533	533	Drinking Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)
533	533	Drinking Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
533	533	Drinking Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)
533	533	Drinking Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)
533	533	Drinking Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
533	533	Drinking Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)
533	533	Drinking Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
533	533	Drinking Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
533	533	Drinking Water	Perfluorobutanoic acid (PFBA)
533	533	Drinking Water	Perfluoroheptanesulfonic acid (PFHpS)
533	533	Drinking Water	Perfluoropentanesulfonic acid (PFPeS)
533	533	Drinking Water	Perfluoropentanoic acid (PFPeA)
533	533	Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
533	533	Water	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)
533	533	Water	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)
533	533	Water	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)
533	533	Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
533	533	Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)

Client: City & County of Honolulu
Job ID: 380-69290-1
Project/Site: RED-HILL

Laboratory: Eurofins Eaton Analytical Pomona (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
533	533	Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)
533	533	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
533	533	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)
533	533	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
533	533	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
533	533	Water	Perfluorobutanoic acid (PFBA)
533	533	Water	Perfluoroheptanesulfonic acid (PFHpS)
533	533	Water	Perfluoropentanesulfonic acid (PFPeS)
533	533	Water	Perfluoropentanoic acid (PFPeA)
537.1	537.1 DW	Drinking Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
537.1	537.1 DW	Drinking Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
537.1	537.1 DW	Drinking Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)
537.1	537.1 DW	Drinking Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)
537.1	537.1 DW	Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
537.1	537.1 DW	Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
537.1	537.1 DW	Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)
537.1	537.1 DW	Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)

Method Summary

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

Job ID: 380-69290-1

Method	Method Description	Protocol	Laboratory
525.2	Semivolatile Organic Compounds (GC/MS)	EPA	EA POM
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA POM
537.1	Perfluorinated Alkyl Acids (LC/MS)	EPA	EA POM
525.2	Extraction of Semivolatile Compounds	EPA	EA POM
533	Extraction of Perfluorinated and Polyfluorinated Alkyl Acids	EPA	EA POM
537.1 DW	Extraction of Perfluorinated Alkyl Acids	EPA	EA POM

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

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

Sample Summary

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

Job ID: 380-69290-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-69290-1	MOANALUA WELLS	Drinking Water	10/30/23 09:56	11/01/23 10:30	HI0000331
380-69290-2	AIEA GULCH WELLS PUMP 2	Drinking Water	10/30/23 11:09	11/01/23 10:30	HI0000331
380-69290-3	AIEA WELLS PUMPS 1&2 (260) P2	Drinking Water	10/30/23 11:44	11/01/23 10:30	HI0000331
380-69290-4	HALAWA WELLS UNITS 1 & 2 P1	Drinking Water	10/30/23 10:37	11/01/23 10:30	HI0000331
380-69290-9	FB MOANALUA WELLS	Water	10/30/23 09:56	11/01/23 10:30	
380-69290-10	FB AIEA GULCH WELLS PUMP 2	Water	10/30/23 11:09	11/01/23 10:30	
380-69290-11	FB AIEA WELLS PUMPS 1&2 (260) P2	Water	10/30/23 11:44	11/01/23 10:30	
380-69290-12	FB HALAWA WELLS UNITS 1 & 2 P1	Water	10/30/23 10:37	11/01/23 10:30	

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

Chain of Custody Record

eurofins

Client Information	Sampler: BAILEY	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-27941-2757 2
Client Contact: Dr Ron Fenstermacher	Phone: 808-748-5840	E Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin:	Page: Page 1 of 2
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: 808-748-5091 (tel)	PO #: C20525101 exp 05312023			
Email: rfenstemacher@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	SUBCONTRACT - 8015 Gas (Purgable) LL (EAL)	SUBCONTRACT - 8915 Diesel LL (EAL) and Motor Oil	525.2_PREC - (MOD) 525plus PLUS TICs	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	537.1_DW_PREC - 537.1 Full List	533 - All Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code.				R	R	RA		RA	Y	N		
MOANALUA WELLS	30-Oct-2023	0956	G	Water			2		2	2	4				
AIEA GULCH WELLS PUMP2	30-Oct-2023	1109	G	Water			2		2	2	4				
AIEA WELLS PUMPS 1&2 (260) P2	30-Oct-2023	1144	G	Water			2		2	2	4				
HALAWA WELLS UNITS 1&2 P1	30-Oct-2023	1037	G	Water			2		2	2	4				
TB MOANALUA WELLS	30-Oct-2023	0956		Water							2				
TB AIEA GULCH WELLS PUMP2	30-Oct-2023	1109		Water							2				
TB AIEA WELLS PUMPS 1&2 (260)	30-Oct-2023	1144		Water							2				
TB HALAWA WELLS UNITS 1&2	30-Oct-2023	1037		Water							2				

380-69290 COC

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

FED EX ① 7739 3103 3916 ② 7739 3103 3927 ③ 7739 3103 3938

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
BAILEY	31 October 2023 1400	HBWS	C REITNER	11/01/2023 10:30	EEAP
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact	Custody Seal No	Cooler Temperature(s) °C and Other Remarks
Δ Yes Δ No		GEL-FROZEN (751A) ① 1.3° 0.1°-1.2° (2) 2.5° 0.1°-2.4° (3) 1.6° 0.1°-1.5°

Ver: 01/16/2019

11/21/2023

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

Chain of Custody Record

eurofins

Client Information	Sampler: BAILEY	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-27941-2757 2
Client Contact: Dr Ron Fenstermacher	Phone: 808-748-5840	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin:	Page: Page 2 of 2
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: 808-748-5091 (tel)	PO #: C20525101 exp 05312023			
Email: rfenstemacher@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, Other:
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)

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	SUBCONTRACT - 8015 Gas (Purgable) LL (EAL)	SUBCONTRACT - 8915 Diesel LL (EAL) and Motor Oil	525.2_PREC - (MOD) 525plus PLUS TICs	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	537.1_DW_PREC - 537.1 Full List	533 - All Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	R	RA		RA	Y	N		
MOANALUA WELLS	30-Oct-2023	0956	G	Water								3	3		
AIEA GULCH WELLS PUMP2	30-Oct-2023	1109	G	Water								3	3		
AIEA WELLS PUMPS 1&2 (260) P2	30-Oct-2023	1144	G	Water								3	3		
HALAWA WELLS UNITS 1&2 P1	30-Oct-2023	1037	G	Water								3	3		
FB MOANALUA WELLS	30-Oct-2023	0956		Water								1	1		
FB AIEA GULCH WELLS PUMP2	30-Oct-2023	1109		Water								1	1		
FB AIEA WELLS PUMPS 1&2 (260)	30-Oct-2023	1144		Water								1	1		
FB HALAWA WELLS UNITS 1&2	30-Oct-2023	1037		Water								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:
① 7739 3103 3916
② 7739 3103 3927

Empty Kit Relinquished by	Date	Time	Method of Shipment: FEDEX ③ 7739 3103 3938

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
BAILEY	31 October 2023 400	HBWS	O.REITNER	11/10/2023 10:30	EEAP
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No:	Cooler Temperature(s) °C and Other Remarks
		GEL-FROZEN 751A ① 13° 01°-12° / ②25° 01°-24° / ③16 01°-15°

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-69290-1

Login Number: 69290
List Number: 1
Creator: Elyas, Matthew

List Source: Eurofins Eaton Analytical Pomona

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