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ANALYTICAL REPORT

PREPARED FOR

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

Generated 4/22/2024 10:03:16 AM

JOB DESCRIPTION

RED-HILL
525.2, 533, 537.1

JOB NUMBER

380-90728-1

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

See page two for job notes and contact information.

my EOL

Eurofins Eaton Analytical Pomona

Job Notes

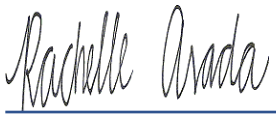
This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins 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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Authorized for release by
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Table of Contents

Definitions/Glossary

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

Job ID: 380-90728-1
SDG: 525.2, 533, 537.1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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 Narrative
380-90728-1

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 4/10/2024 10:17 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.3°C.

Receipt Exceptions
Ice formation exists in one of the received 533 samples from site AIEA GULCH WELLS PUMP 2 (380-90728-1), and in the received 533 FB sample from site FB: AIEA GULCH WELLS PUMP 2 (380-90728-3). Analysis of FB: AIEA GULCH WELLS PUMP 2 (380-90728-3) cancelled as there is no exta available volume.

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: 380-90728-1
SDG: 525.2, 533, 537.1

Client Sample ID: AIEA GULCH WELLS PUMP 2 — Lab Sample ID: 380-90728-1

No Detections.

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) Pump #1 — Lab Sample ID: 380-90728-2

No Detections.

Client Sample ID: FB: AIEA GULCH WELLS PUMP 2 — Lab Sample ID: 380-90728-3

No Detections.

Client Sample ID: FB: AIEA WELLS PUMPS 1&2 (260) Pump #1 — Lab Sample ID: 380-90728-4

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: AIEA GULCH WELLS PUMP 2

Date Collected: 04/08/24 08:55
Date Received: 04/10/24 10:17

Lab Sample ID: 380-90728-1

Matrix: Drinking Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
2,4'-DDD	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
2,4'-DDE	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
2,4'-DDT	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
2,4-Dinitrotoluene	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
2,6-Dinitrotoluene	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
2-Methylnaphthalene	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
4,4'-DDD	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
4,4'-DDE	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
4,4'-DDT	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Acenaphthene	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Acenaphthylene	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Acetochlor	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Alachlor	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 09:54	1
alpha-BHC	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
alpha-Chlordane	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 09:54	1
Anthracene	<0.019		0.019		ug/L		04/17/24 10:00	04/18/24 09:54	1
Atrazine	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 09:54	1
Benz(a)anthracene	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 09:54	1
Benzo[a]pyrene	<0.019		0.019		ug/L		04/17/24 10:00	04/18/24 09:54	1
Benzo[b]fluoranthene	<0.019		0.019		ug/L		04/17/24 10:00	04/18/24 09:54	1
Benzo[g,h,i]perylene	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 09:54	1
Benzo[k]fluoranthene	<0.019		0.019		ug/L		04/17/24 10:00	04/18/24 09:54	1
beta-BHC	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58		ug/L		04/17/24 10:00	04/18/24 09:54	1
Bromacil	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Butachlor	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 09:54	1
Butylbenzylphthalate	<0.49		0.49		ug/L		04/17/24 10:00	04/18/24 09:54	1
Chlorobenzilate	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Chloroneb	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Chlorpyrifos	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 09:54	1
Chrysene	<0.019		0.019		ug/L		04/17/24 10:00	04/18/24 09:54	1
delta-BHC	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Di(2-ethylhexyl)adipate	<0.58		0.58		ug/L		04/17/24 10:00	04/18/24 09:54	1
Dibenz(a,h)anthracene	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 09:54	1
Diclorvos (DDVP)	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 09:54	1
Dieldrin	<0.19		0.19		ug/L		04/17/24 10:00	04/18/24 09:54	1
Diethylphthalate	<0.49		0.49		ug/L		04/17/24 10:00	04/18/24 09:54	1
Dimethylphthalate	<0.49		0.49		ug/L		04/17/24 10:00	04/18/24 09:54	1
Di-n-butyl phthalate	<0.97		0.97		ug/L		04/17/24 10:00	04/18/24 09:54	1
Di-n-octyl phthalate	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Endosulfan I (Alpha)	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Endosulfan II (Beta)	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Endosulfan sulfate	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Endrin	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Endrin aldehyde	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
EPTC	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Fluoranthene	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1

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

Job ID: 380-90728-1
SDG: 525.2, 533, 537.1

Client Sample ID: AIEA GULCH WELLS PUMP 2
Date Collected: 04/08/24 08:55
Date Received: 04/10/24 10:17

Lab Sample ID: 380-90728-1
Matrix: Drinking Water

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		04/17/24 10:00	04/18/24 09:54	1
gamma-Chlordane	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 09:54	1
Heptachlor	<0.039		0.039		ug/L		04/17/24 10:00	04/18/24 09:54	1
Heptachlor epoxide (isomer B)	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 09:54	1
Hexachlorobenzene	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 09:54	1
Hexachlorocyclopentadiene	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 09:54	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 09:54	1
Isophorone	<0.49		0.49		ug/L		04/17/24 10:00	04/18/24 09:54	1
Lindane	<0.039		0.039		ug/L		04/17/24 10:00	04/18/24 09:54	1
Malathion	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Methoxychlor	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Metolachlor	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 09:54	1
Molinate	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Naphthalene	<0.29		0.29		ug/L		04/17/24 10:00	04/18/24 09:54	1
Parathion	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Pendimethalin (Penoxaline)	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Phenanthrene	<0.039		0.039		ug/L		04/17/24 10:00	04/18/24 09:54	1
Propachlor	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 09:54	1
Pyrene	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 09:54	1
Simazine	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 09:54	1
Terbacil	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Terbuthylazine	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1
Thiobencarb	<0.19		0.19		ug/L		04/17/24 10:00	04/18/24 09:54	1
Total Permethrin (mixed isomers)	<0.19		0.19		ug/L		04/17/24 10:00	04/18/24 09:54	1
trans-Nonachlor	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 09:54	1
Trifluralin	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 09:54	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*			*N/A*	*04/17/24 10:00*	*04/18/24 09:54*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*96*		*70 - 130*	*04/17/24 10:00*	*04/18/24 09:54*	*1*
Perylene-d12	*88*		*70 - 130*	*04/17/24 10:00*	*04/18/24 09:54*	*1*
Triphenylphosphate	*100*		*70 - 130*	*04/17/24 10:00*	*04/18/24 09:54*	*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		04/11/24 10:22	04/12/24 08:01	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1

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

Job ID: 380-90728-1
SDG: 525.2, 533, 537.1

Client Sample ID: AIEA GULCH WELLS PUMP 2
Date Collected: 04/08/24 08:55
Date Received: 04/10/24 10:17

Lab Sample ID: 380-90728-1
Matrix: Drinking Water

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		04/11/24 10:22	04/12/24 08:01	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:01	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*91*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:01*	*1*
13C6 PFDA	*94*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:01*	*1*
13C5 PFHxA	*88*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:01*	*1*
13C4 PFHpA	*92*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:01*	*1*
13C8 PFOA	*92*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:01*	*1*
13C9 PFNA	*94*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:01*	*1*
13C7 PFUnA	*90*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:01*	*1*
13C2 PFDoA	*89*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:01*	*1*
13C4 PFBA	*91*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:01*	*1*
13C5 PFPeA	*99*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:01*	*1*
13C3 PFBS	*96*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:01*	*1*
13C3 PFHxS	*95*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:01*	*1*
13C8 PFOS	*95*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:01*	*1*
13C2-4:2-FTS	*95*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:01*	*1*
13C2-6:2-FTS	*87*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:01*	*1*
13C2-8:2-FTS	*77*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:01*	*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		04/11/24 06:45	04/12/24 04:16	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:16	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:16	1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-90728-1
Date Collected: 04/08/24 08:55
Matrix: Drinking Water
Date Received: 04/10/24 10:17

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		04/11/24 06:45	04/12/24 04:16	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:16	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:16	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:16	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:16	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:16	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:16	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:16	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:16	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:16	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:16	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:16	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*105*		*70 - 130*	*04/11/24 06:45*	*04/12/24 04:16*	*1*
13C2 PFHxA	*110*		*70 - 130*	*04/11/24 06:45*	*04/12/24 04:16*	*1*
13C2 PFDA	*110*		*70 - 130*	*04/11/24 06:45*	*04/12/24 04:16*	*1*
13C3-GenX	*106*		*70 - 130*	*04/11/24 06:45*	*04/12/24 04:16*	*1*

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

Lab Sample ID: 380-90728-2
Date Collected: 04/08/24 09:30
Matrix: Drinking Water
Date Received: 04/10/24 10:17

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
2,4'-DDD	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
2,4'-DDE	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
2,4'-DDT	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
2,4-Dinitrotoluene	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
2,6-Dinitrotoluene	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
2-Methylnaphthalene	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
4,4'-DDD	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
4,4'-DDE	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
4,4'-DDT	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Acenaphthene	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Acenaphthylene	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Acetochlor	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Alachlor	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 11:34	1
alpha-BHC	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
alpha-Chlordane	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 11:34	1
Anthracene	<0.019		0.019		ug/L		04/17/24 10:00	04/18/24 11:34	1
Atrazine	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 11:34	1
Benz(a)anthracene	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 11:34	1
Benzo[a]pyrene	<0.019		0.019		ug/L		04/17/24 10:00	04/18/24 11:34	1
Benzo[b]fluoranthene	<0.019		0.019		ug/L		04/17/24 10:00	04/18/24 11:34	1
Benzo[g,h,i]perylene	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 11:34	1

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

Job ID: 380-90728-1
SDG: 525.2, 533, 537.1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) Pump #1
Date Collected: 04/08/24 09:30
Date Received: 04/10/24 10:17

Lab Sample ID: 380-90728-2
Matrix: Drinking Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	<0.019		0.019		ug/L		04/17/24 10:00	04/18/24 11:34	1
beta-BHC	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58		ug/L		04/17/24 10:00	04/18/24 11:34	1
Bromacil	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Butachlor	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 11:34	1
Butylbenzylphthalate	<0.49		0.49		ug/L		04/17/24 10:00	04/18/24 11:34	1
Chlorobenzilate	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Chloroneb	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Chlorpyrifos	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 11:34	1
Chrysene	<0.019		0.019		ug/L		04/17/24 10:00	04/18/24 11:34	1
delta-BHC	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Di(2-ethylhexyl)adipate	<0.58		0.58		ug/L		04/17/24 10:00	04/18/24 11:34	1
Dibenz(a,h)anthracene	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 11:34	1
Diclorvos (DDVP)	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 11:34	1
Dieldrin	<0.19		0.19		ug/L		04/17/24 10:00	04/18/24 11:34	1
Diethylphthalate	<0.49		0.49		ug/L		04/17/24 10:00	04/18/24 11:34	1
Dimethylphthalate	<0.49		0.49		ug/L		04/17/24 10:00	04/18/24 11:34	1
Di-n-butyl phthalate	<0.97		0.97		ug/L		04/17/24 10:00	04/18/24 11:34	1
Di-n-octyl phthalate	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Endosulfan I (Alpha)	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Endosulfan II (Beta)	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Endosulfan sulfate	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Endrin	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Endrin aldehyde	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
EPTC	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Fluoranthene	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Fluorene	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 11:34	1
gamma-Chlordane	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 11:34	1
Heptachlor	<0.039		0.039		ug/L		04/17/24 10:00	04/18/24 11:34	1
Heptachlor epoxide (isomer B)	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 11:34	1
Hexachlorobenzene	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 11:34	1
Hexachlorocyclopentadiene	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 11:34	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 11:34	1
Isophorone	<0.49		0.49		ug/L		04/17/24 10:00	04/18/24 11:34	1
Lindane	<0.039		0.039		ug/L		04/17/24 10:00	04/18/24 11:34	1
Malathion	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Methoxychlor	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Metolachlor	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 11:34	1
Molinate	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Naphthalene	<0.29		0.29		ug/L		04/17/24 10:00	04/18/24 11:34	1
Parathion	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Pendimethalin (Penoxaline)	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Phenanthrene	<0.039		0.039		ug/L		04/17/24 10:00	04/18/24 11:34	1
Propachlor	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 11:34	1
Pyrene	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 11:34	1
Simazine	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 11:34	1
Terbacil	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1
Terbuthylazine	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) Pump #1
Date Collected: 04/08/24 09:30
Date Received: 04/10/24 10:17

Lab Sample ID: 380-90728-2
Matrix: Drinking Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Thiobencarb	<0.19		0.19		ug/L		04/17/24 10:00	04/18/24 11:34	1
Total Permethrin (mixed isomers)	<0.19		0.19		ug/L		04/17/24 10:00	04/18/24 11:34	1
trans-Nonachlor	<0.049		0.049		ug/L		04/17/24 10:00	04/18/24 11:34	1
Trifluralin	<0.097		0.097		ug/L		04/17/24 10:00	04/18/24 11:34	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*			*N/A*	*04/17/24 10:00*	*04/18/24 11:34*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*100*		*70 - 130*	*04/17/24 10:00*	*04/18/24 11:34*	*1*
Perylene-d12	*94*		*70 - 130*	*04/17/24 10:00*	*04/18/24 11:34*	*1*
Triphenylphosphate	*103*		*70 - 130*	*04/17/24 10:00*	*04/18/24 11:34*	*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		04/11/24 10:22	04/12/24 08:12	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:12	1

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

Job ID: 380-90728-1
SDG: 525.2, 533, 537.1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) Pump #1
Date Collected: 04/08/24 09:30
Date Received: 04/10/24 10:17

Lab Sample ID: 380-90728-2
Matrix: Drinking Water

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*65*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:12*	*1*
13C6 PFDA	*77*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:12*	*1*
13C5 PFHxA	*69*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:12*	*1*
13C4 PFHpA	*72*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:12*	*1*
13C8 PFOA	*73*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:12*	*1*
13C9 PFNA	*75*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:12*	*1*
13C7 PFUnA	*77*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:12*	*1*
13C2 PFDoA	*78*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:12*	*1*
13C4 PFBA	*75*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:12*	*1*
13C5 PFPeA	*77*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:12*	*1*
13C3 PFBS	*91*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:12*	*1*
13C3 PFHxS	*90*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:12*	*1*
13C8 PFOS	*88*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:12*	*1*
13C2-4:2-FTS	*99*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:12*	*1*
13C2-6:2-FTS	*86*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:12*	*1*
13C2-8:2-FTS	*76*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:12*	*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		04/11/24 06:45	04/12/24 01:29	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/11/24 06:45	04/12/24 01:29	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/11/24 06:45	04/12/24 01:29	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		04/11/24 06:45	04/12/24 01:29	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		04/11/24 06:45	04/12/24 01:29	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/11/24 06:45	04/12/24 01:29	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/11/24 06:45	04/12/24 01:29	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/11/24 06:45	04/12/24 01:29	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/11/24 06:45	04/12/24 01:29	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/11/24 06:45	04/12/24 01:29	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/11/24 06:45	04/12/24 01:29	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/11/24 06:45	04/12/24 01:29	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/11/24 06:45	04/12/24 01:29	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		04/11/24 06:45	04/12/24 01:29	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		04/11/24 06:45	04/12/24 01:29	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/11/24 06:45	04/12/24 01:29	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/11/24 06:45	04/12/24 01:29	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/11/24 06:45	04/12/24 01:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*110*		*70 - 130*	*04/11/24 06:45*	*04/12/24 01:29*	*1*
13C2 PFHxA	*110*		*70 - 130*	*04/11/24 06:45*	*04/12/24 01:29*	*1*
13C2 PFDA	*109*		*70 - 130*	*04/11/24 06:45*	*04/12/24 01:29*	*1*
13C3-GenX	*103*		*70 - 130*	*04/11/24 06:45*	*04/12/24 01:29*	*1*

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

Job ID: 380-90728-1
SDG: 525.2, 533, 537.1

Client Sample ID: FB: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-90728-3
Matrix: Water
Date Collected: 04/08/24 08:55
Date Received: 04/10/24 10:17

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		04/11/24 06:45	04/12/24 04:26	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:26	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:26	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:26	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:26	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:26	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:26	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:26	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:26	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:26	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:26	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:26	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:26	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:26	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:26	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:26	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*105*		*70 - 130*	*04/11/24 06:45*	*04/12/24 04:26*	*1*
13C2 PFHxA	*110*		*70 - 130*	*04/11/24 06:45*	*04/12/24 04:26*	*1*
13C2 PFDA	*109*		*70 - 130*	*04/11/24 06:45*	*04/12/24 04:26*	*1*
13C3-GenX	*103*		*70 - 130*	*04/11/24 06:45*	*04/12/24 04:26*	*1*

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

Lab Sample ID: 380-90728-4
Matrix: Water
Date Collected: 04/08/24 09:30
Date Received: 04/10/24 10:17

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1

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

Job ID: 380-90728-1
SDG: 525.2, 533, 537.1

Client Sample ID: FB: AIEA WELLS PUMPS 1&2 (260) Pump #1
Date Collected: 04/08/24 09:30
Date Received: 04/10/24 10:17

Lab Sample ID: 380-90728-4
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		04/11/24 10:22	04/12/24 08:33	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*84*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:33*	*1*
13C6 PFDA	*87*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:33*	*1*
13C5 PFHxA	*84*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:33*	*1*
13C4 PFHpA	*87*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:33*	*1*
13C8 PFOA	*86*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:33*	*1*
13C9 PFNA	*87*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:33*	*1*
13C7 PFUnA	*86*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:33*	*1*
13C2 PFDoA	*85*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:33*	*1*
13C4 PFBA	*85*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:33*	*1*
13C5 PFPeA	*91*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:33*	*1*
13C3 PFBS	*89*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:33*	*1*
13C3 PFHxS	*88*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:33*	*1*
13C8 PFOS	*89*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:33*	*1*
13C2-4:2-FTS	*93*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:33*	*1*
13C2-6:2-FTS	*87*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:33*	*1*
13C2-8:2-FTS	*77*		*50 - 200*	*04/11/24 10:22*	*04/12/24 08:33*	*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		04/11/24 06:45	04/12/24 04:36	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:36	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:36	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:36	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:36	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:36	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:36	1

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

Job ID: 380-90728-1
SDG: 525.2, 533, 537.1

Client Sample ID: FB: AIEA WELLS PUMPS 1&2 (260) Pump #1
Date Collected: 04/08/24 09:30
Date Received: 04/10/24 10:17

Lab Sample ID: 380-90728-4
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:36	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:36	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:36	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:36	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:36	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:36	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:36	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:36	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:36	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		04/11/24 06:45	04/12/24 04:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*110*		*70 - 130*	*04/11/24 06:45*	*04/12/24 04:36*	*1*
13C2 PFHxA	*109*		*70 - 130*	*04/11/24 06:45*	*04/12/24 04:36*	*1*
13C2 PFDA	*108*		*70 - 130*	*04/11/24 06:45*	*04/12/24 04:36*	*1*
13C3-GenX	*106*		*70 - 130*	*04/11/24 06:45*	*04/12/24 04:36*	*1*

Action Limit Summary

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

Job ID: 380-90728-1
SDG: 525.2, 533, 537.1

Client Sample ID: AIEA GULCH WELLS PUMP 2 — Lab Sample ID: 380-90728-1

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
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	<0.019		ug/L	0.2	0.019	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.58		ug/L	6	0.58	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.58		ug/L	400	0.58	525.2	Total/NA
Endrin	<0.097		ug/L	2	0.097	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	<0.097		ug/L	40	0.097	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) Pump #1 — Lab Sample ID: 380-90728-2

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
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	<0.019		ug/L	0.2	0.019	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.58		ug/L	6	0.58	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.58		ug/L	400	0.58	525.2	Total/NA
Endrin	<0.097		ug/L	2	0.097	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	<0.097		ug/L	40	0.097	525.2	Total/NA
Simazine	<0.049		ug/L	4	0.049	525.2	Total/NA

Surrogate Summary

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

Job ID: 380-90728-1
SDG: 525.2, 533, 537.1

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)
380-90728-1	AIEA GULCH WELLS PUMP 2	96	88	100
380-90728-1 DU	AIEA GULCH WELLS PUMP 2	97	96	108
380-90728-2	AIEA WELLS PUMPS 1&2 (260) Pump #1	100	94	103

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)
380-90733-B-1-A MS	Matrix Spike	96	97	108
LCS 380-86272/23-A	Lab Control Sample	97	101	103
MB 380-86272/21-A	Method Blank	97	91	104
MRL 380-86272/22-A	Lab Control Sample	95	95	104

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)
380-90728-1	AIEA GULCH WELLS PUMP 2	105	110	110	106
380-90728-2	AIEA WELLS PUMPS 1&2 (260) Pump #1	110	110	109	103
380-90728-2 LMS	AIEA WELLS PUMPS 1&2 (260) Pump #1	101	104	108	102
380-90728-2 LMSD	AIEA WELLS PUMPS 1&2 (260) Pump #1	108	115	111	106

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS	PFHxA	PFDA	GenX
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
380-90728-3	FB: AIEA GULCH WELLS PUMP	105	110	109	103

Surrogate Summary

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

Job ID: 380-90728-1
SDG: 525.2, 533, 537.1

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

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)
380-90728-4	FB: AIEA WELLS PUMPS 1&2 (	110	109	108	106
LCS 380-85410/23-A	Lab Control Sample	103	112	111	111
MBL 380-85410/21-A	Method Blank	99	101	102	96
MRL 380-85410/22-A	Lab Control Sample	103	103	110	99

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: 380-90728-1
SDG: 525.2, 533, 537.1

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)
380-90728-1	AIEA GULCH WELLS PUMP 2	91	94	88	92	92	94	90	89
380-90728-2	AIEA WELLS PUMPS 1&2 (260) Pump #1	65	77	69	72	73	75	77	78

		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)
380-90728-1	AIEA GULCH WELLS PUMP 2	91	99	96	95	95	95	87	77
380-90728-2	AIEA WELLS PUMPS 1&2 (260) Pump #1	75	77	91	90	88	99	86	76

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)
380-90682-B-1-B MS	Matrix Spike	77	74	76	76	73	75	72	70
380-90682-C-1-B MSD	Matrix Spike Duplicate	76	72	77	76	73	76	70	63
380-90728-4	FB: AIEA WELLS PUMPS 1&2 (260) Pump #1	84	87	84	87	86	87	86	85
LCS 380-85452/23-A	Lab Control Sample	96	95	92	96	97	96	94	94
MBL 380-85452/21-A	Method Blank	85	88	88	89	91	91	86	86
MRL 380-85452/22-A	Lab Control Sample	86	89	88	92	90	92	87	86

		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)
380-90682-B-1-B MS	Matrix Spike	84	121	89	91	89	118	93	74
380-90682-C-1-B MSD	Matrix Spike Duplicate	83	118	84	88	87	115	90	71
380-90728-4	FB: AIEA WELLS PUMPS 1&2 (260) Pump #1	85	91	89	88	89	93	87	77
LCS 380-85452/23-A	Lab Control Sample	93	98	97	97	96	97	91	81
MBL 380-85452/21-A	Method Blank	89	94	93	93	92	89	86	73
MRL 380-85452/22-A	Lab Control Sample	89	94	93	91	91	92	83	75

Isotope Dilution Summary

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

Job ID: 380-90728-1
SDG: 525.2, 533, 537.1

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 380-86272/21-A
Matrix: Water
Analysis Batch: 86505

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 86272

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
2,4'-DDD	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
2,4'-DDE	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
2,4'-DDT	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
2,4-Dinitrotoluene	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
2,6-Dinitrotoluene	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
2-Methylnaphthalene	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
4,4'-DDD	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
4,4'-DDE	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
4,4'-DDT	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Acenaphthene	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Acenaphthylene	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Acetochlor	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Alachlor	<0.050		0.050		ug/L		04/17/24 10:00	04/18/24 09:35	1
alpha-BHC	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
alpha-Chlordane	<0.050		0.050		ug/L		04/17/24 10:00	04/18/24 09:35	1
Anthracene	<0.020		0.020		ug/L		04/17/24 10:00	04/18/24 09:35	1
Atrazine	<0.050		0.050		ug/L		04/17/24 10:00	04/18/24 09:35	1
Benz(a)anthracene	<0.050		0.050		ug/L		04/17/24 10:00	04/18/24 09:35	1
Benzo[a]pyrene	<0.020		0.020		ug/L		04/17/24 10:00	04/18/24 09:35	1
Benzo[b]fluoranthene	<0.020		0.020		ug/L		04/17/24 10:00	04/18/24 09:35	1
Benzo[g,h,i]perylene	<0.050		0.050		ug/L		04/17/24 10:00	04/18/24 09:35	1
Benzo[k]fluoranthene	<0.020		0.020		ug/L		04/17/24 10:00	04/18/24 09:35	1
beta-BHC	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Bis(2-ethylhexyl) phthalate	<0.60		0.60		ug/L		04/17/24 10:00	04/18/24 09:35	1
Bromacil	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Butachlor	<0.050		0.050		ug/L		04/17/24 10:00	04/18/24 09:35	1
Butylbenzylphthalate	<0.50		0.50		ug/L		04/17/24 10:00	04/18/24 09:35	1
Chlorobenzilate	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Chloroneb	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Chlorpyrifos	<0.050		0.050		ug/L		04/17/24 10:00	04/18/24 09:35	1
Chrysene	<0.020		0.020		ug/L		04/17/24 10:00	04/18/24 09:35	1
delta-BHC	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Di(2-ethylhexyl)adipate	<0.60		0.60		ug/L		04/17/24 10:00	04/18/24 09:35	1
Dibenz(a,h)anthracene	<0.050		0.050		ug/L		04/17/24 10:00	04/18/24 09:35	1
Diclorvos (DDVP)	<0.050		0.050		ug/L		04/17/24 10:00	04/18/24 09:35	1
Dieldrin	<0.20		0.20		ug/L		04/17/24 10:00	04/18/24 09:35	1
Diethylphthalate	<0.50		0.50		ug/L		04/17/24 10:00	04/18/24 09:35	1
Dimethylphthalate	<0.50		0.50		ug/L		04/17/24 10:00	04/18/24 09:35	1
Di-n-butyl phthalate	<0.99		0.99		ug/L		04/17/24 10:00	04/18/24 09:35	1
Di-n-octyl phthalate	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Endosulfan I (Alpha)	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Endosulfan II (Beta)	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Endosulfan sulfate	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Endrin	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Endrin aldehyde	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
EPTC	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1

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

Lab Sample ID: MB 380-86272/21-A
Matrix: Water
Analysis Batch: 86505

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 86272

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Fluorene	<0.050		0.050		ug/L		04/17/24 10:00	04/18/24 09:35	1
gamma-Chlordane	<0.050		0.050		ug/L		04/17/24 10:00	04/18/24 09:35	1
Heptachlor	<0.040		0.040		ug/L		04/17/24 10:00	04/18/24 09:35	1
Heptachlor epoxide (isomer B)	<0.050		0.050		ug/L		04/17/24 10:00	04/18/24 09:35	1
Hexachlorobenzene	<0.050		0.050		ug/L		04/17/24 10:00	04/18/24 09:35	1
Hexachlorocyclopentadiene	<0.050		0.050		ug/L		04/17/24 10:00	04/18/24 09:35	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050		ug/L		04/17/24 10:00	04/18/24 09:35	1
Isophorone	<0.50		0.50		ug/L		04/17/24 10:00	04/18/24 09:35	1
Lindane	<0.040		0.040		ug/L		04/17/24 10:00	04/18/24 09:35	1
Malathion	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Methoxychlor	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Metolachlor	<0.050		0.050		ug/L		04/17/24 10:00	04/18/24 09:35	1
Molinate	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Naphthalene	<0.30		0.30		ug/L		04/17/24 10:00	04/18/24 09:35	1
Parathion	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Pendimethalin (Penoxaline)	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Phenanthrene	<0.040		0.040		ug/L		04/17/24 10:00	04/18/24 09:35	1
Propachlor	<0.050		0.050		ug/L		04/17/24 10:00	04/18/24 09:35	1
Pyrene	<0.050		0.050		ug/L		04/17/24 10:00	04/18/24 09:35	1
Simazine	<0.050		0.050		ug/L		04/17/24 10:00	04/18/24 09:35	1
Terbacil	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Terbuthylazine	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1
Thiobencarb	<0.20		0.20		ug/L		04/17/24 10:00	04/18/24 09:35	1
Total Permethrin (mixed isomers)	<0.20		0.20		ug/L		04/17/24 10:00	04/18/24 09:35	1
trans-Nonachlor	<0.050		0.050		ug/L		04/17/24 10:00	04/18/24 09:35	1
Trifluralin	<0.099		0.099		ug/L		04/17/24 10:00	04/18/24 09:35	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
3,6,6-Trimethyl-cyclohex-2-enol	*0.580*	*T J N*	*ug/L*		*2.29*	*73741-62-5*	*04/17/24 10:00*	*04/18/24 09:35*	*1*
Cyclotetrasiloxane, octamethyl-	*0.908*	*T J N*	*ug/L*		*2.34*	*556-67-2*	*04/17/24 10:00*	*04/18/24 09:35*	*1*
Camphene	*0.587*	*T J N*	*ug/L*		*2.41*	*79-92-5*	*04/17/24 10:00*	*04/18/24 09:35*	*1*
Cyclopentasiloxane, decamethyl-	*0.667*	*T J N*	*ug/L*		*2.77*	*541-02-6*	*04/17/24 10:00*	*04/18/24 09:35*	*1*
n-Hexadecanoic acid	*0.678*	*T J N*	*ug/L*		*5.96*	*57-10-3*	*04/17/24 10:00*	*04/18/24 09:35*	*1*
Unknown	*0.641*	*T J*	*ug/L*		*11.21*	*N/A*	*04/17/24 10:00*	*04/18/24 09:35*	*1*
Unknown	*0.531*	*T J*	*ug/L*		*11.26*	*N/A*	*04/17/24 10:00*	*04/18/24 09:35*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*97*		*70 - 130*	*04/17/24 10:00*	*04/18/24 09:35*	*1*
Perylene-d12	*91*		*70 - 130*	*04/17/24 10:00*	*04/18/24 09:35*	*1*
Triphenylphosphate	*104*		*70 - 130*	*04/17/24 10:00*	*04/18/24 09:35*	*1*

Lab Sample ID: LCS 380-86272/23-A
Matrix: Water
Analysis Batch: 86505

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 86272

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1-Methylnaphthalene			1.98	2.06		ug/L		104	70 - 130		

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

Lab Sample ID: LCS 380-86272/23-A
Matrix: Water
Analysis Batch: 86505

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 86272

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	1.98	2.11		ug/L		106	70 - 130
2,4'-DDE	1.98	2.02		ug/L		102	70 - 130
2,4'-DDT	1.98	2.16		ug/L		109	70 - 130
2,4-Dinitrotoluene	1.98	1.90		ug/L		96	70 - 130
2,6-Dinitrotoluene	1.98	1.86		ug/L		94	70 - 130
2-Methylnaphthalene	1.98	2.09		ug/L		106	70 - 130
4,4'-DDD	1.98	2.15		ug/L		109	70 - 130
4,4'-DDE	1.98	2.01		ug/L		101	70 - 130
4,4'-DDT	1.98	1.91		ug/L		96	70 - 130
Acenaphthene	1.98	1.95		ug/L		98	70 - 130
Acenaphthylene	1.98	2.05		ug/L		103	70 - 130
Acetochlor	1.98	2.12		ug/L		107	70 - 130
Alachlor	1.98	2.10		ug/L		106	70 - 130
alpha-BHC	1.98	2.01		ug/L		101	70 - 130
alpha-Chlordane	1.98	1.97		ug/L		99	70 - 130
Anthracene	1.98	1.68		ug/L		85	70 - 130
Atrazine	1.98	2.24		ug/L		113	70 - 130
Benz(a)anthracene	1.98	1.90		ug/L		96	70 - 130
Benzo[a]pyrene	1.98	1.98		ug/L		100	70 - 130
Benzo[b]fluoranthene	1.98	2.18		ug/L		110	70 - 130
Benzo[g,h,i]perylene	1.98	2.18		ug/L		110	70 - 130
Benzo[k]fluoranthene	1.98	2.24		ug/L		113	70 - 130
beta-BHC	1.98	2.02		ug/L		102	70 - 130
Bis(2-ethylhexyl) phthalate	1.98	1.94		ug/L		98	70 - 130
Bromacil	1.98	2.36		ug/L		119	70 - 130
Butachlor	1.98	2.25		ug/L		114	70 - 130
Butylbenzylphthalate	1.98	2.30		ug/L		116	70 - 130
Chlorobenzilate	1.98	2.23		ug/L		113	70 - 130
Chloroneb	1.98	1.99		ug/L		101	70 - 130
Chlorothalonil (Draconil, Bravo)	1.98	2.26		ug/L		114	70 - 130
Chlorpyrifos	1.98	2.20		ug/L		111	70 - 130
Chrysene	1.98	2.12		ug/L		107	70 - 130
delta-BHC	1.98	2.03		ug/L		102	70 - 130
Di(2-ethylhexyl)adipate	1.98	2.11		ug/L		106	70 - 130
Dibenz(a,h)anthracene	1.98	2.23		ug/L		113	70 - 130
Diclorvos (DDVP)	1.98	2.32		ug/L		117	70 - 130
Dieldrin	1.98	2.06		ug/L		104	70 - 130
Diethylphthalate	1.98	2.06		ug/L		104	70 - 130
Dimethylphthalate	1.98	2.05		ug/L		103	70 - 130
Di-n-butyl phthalate	3.96	4.41		ug/L		111	70 - 130
Di-n-octyl phthalate	1.98	1.65		ug/L		83	70 - 130
Endosulfan I (Alpha)	1.98	2.07		ug/L		104	70 - 130
Endosulfan II (Beta)	1.98	2.18		ug/L		110	70 - 130
Endosulfan sulfate	1.98	2.22		ug/L		112	70 - 130
Endrin	1.98	2.17		ug/L		109	70 - 130
Endrin aldehyde	1.98	1.35		ug/L		68	60 - 130
EPTC	1.98	2.47		ug/L		125	70 - 130
Fluoranthene	1.98	2.11		ug/L		106	70 - 130
Fluorene	1.98	2.06		ug/L		104	70 - 130

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

Lab Sample ID: LCS 380-86272/23-A
Matrix: Water
Analysis Batch: 86505

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 86272

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
gamma-Chlordane	1.98	2.00		ug/L		101	70 - 130
Heptachlor	1.98	2.18		ug/L		110	70 - 130
Heptachlor epoxide (isomer B)	1.98	2.07		ug/L		104	70 - 130
Hexachlorobenzene	1.98	1.90		ug/L		96	70 - 130
Hexachlorocyclopentadiene	1.98	2.12		ug/L		107	70 - 130
Indeno[1,2,3-cd]pyrene	1.98	2.20		ug/L		111	70 - 130
Isophorone	1.98	2.14		ug/L		108	70 - 130
Lindane	1.98	2.10		ug/L		106	70 - 130
Malathion	1.98	2.24		ug/L		113	70 - 130
Methoxychlor	1.98	2.12		ug/L		107	70 - 130
Metolachlor	1.98	2.21		ug/L		112	70 - 130
Molinate	1.98	2.09		ug/L		106	70 - 130
Naphthalene	1.98	1.93		ug/L		97	70 - 130
Parathion	1.98	2.13		ug/L		107	70 - 130
Pendimethalin (Penoxaline)	1.98	2.00		ug/L		101	70 - 130
Phenanthrene	1.98	1.95		ug/L		98	70 - 130
Propachlor	1.98	2.16		ug/L		109	70 - 130
Pyrene	1.98	2.14		ug/L		108	70 - 130
Simazine	1.98	2.25		ug/L		114	70 - 130
Terbacil	1.98	2.17		ug/L		109	70 - 130
Terbuthylazine	1.98	2.25		ug/L		114	70 - 130
Thiobencarb	1.98	2.30		ug/L		116	70 - 130
trans-Nonachlor	1.98	2.02		ug/L		102	70 - 130
Trifluralin	1.98	1.91		ug/L		96	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Nitro-m-xylene	*97*		*70 - 130*
Perylene-d12	*101*		*70 - 130*
Triphenylphosphate	*103*		*70 - 130*

Lab Sample ID: MRL 380-86272/22-A
Matrix: Water
Analysis Batch: 86505

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 86272

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0995	0.110		ug/L		110	50 - 150
2,4'-DDD	0.0995	0.117		ug/L		117	50 - 150
2,4'-DDE	0.0995	0.105		ug/L		105	50 - 150
2,4'-DDT	0.0995	0.0987	J	ug/L		99	50 - 150
2,4-Dinitrotoluene	0.0995	0.103		ug/L		103	50 - 150
2,6-Dinitrotoluene	0.0995	0.111		ug/L		111	50 - 150
2-Methylnaphthalene	0.0995	0.105		ug/L		105	50 - 150
4,4'-DDD	0.0995	0.102		ug/L		103	50 - 150
4,4'-DDE	0.0995	0.0949	J	ug/L		95	50 - 150
4,4'-DDT	0.0995	0.118		ug/L		118	50 - 150
Acenaphthene	0.0995	0.0973	J	ug/L		98	50 - 150
Acenaphthylene	0.0995	0.100		ug/L		101	50 - 150
Acetochlor	0.0497	0.0578	J	ug/L		116	50 - 150

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

Lab Sample ID: MRL 380-86272/22-A
Matrix: Water
Analysis Batch: 86505

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 86272

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Alachlor	0.0497	0.0564		ug/L		113	50 - 150
alpha-BHC	0.0995	0.109		ug/L		110	50 - 150
alpha-Chlordane	0.0249	<0.029		ug/L		88	50 - 150
Anthracene	0.0199	0.0194	J	ug/L		98	50 - 150
Atrazine	0.0497	0.0514		ug/L		103	50 - 150
Benz(a)anthracene	0.0497	0.0523		ug/L		105	50 - 150
Benzo[a]pyrene	0.0199	0.0165	J	ug/L		83	50 - 150
Benzo[b]fluoranthene	0.0199	0.0191	J	ug/L		96	50 - 150
Benzo[g,h,i]perylene	0.0497	0.0437	J	ug/L		88	50 - 150
Benzo[k]fluoranthene	0.0199	0.0182	J	ug/L		92	50 - 150
beta-BHC	0.0995	0.113		ug/L		113	50 - 150
Bis(2-ethylhexyl) phthalate	0.597	0.657		ug/L		110	50 - 150
Bromacil	0.0995	0.114		ug/L		114	50 - 150
Butachlor	0.0497	0.0537		ug/L		108	50 - 150
Butylbenzylphthalate	0.149	0.161	J	ug/L		108	50 - 150
Chlorobenzilate	0.0995	0.103		ug/L		104	50 - 150
Chloroneb	0.0995	0.101		ug/L		101	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0995	0.128		ug/L		129	50 - 150
Chlorpyrifos	0.0497	0.0532		ug/L		107	50 - 150
Chrysene	0.0199	0.0221		ug/L		111	50 - 150
delta-BHC	0.0995	0.121		ug/L		122	50 - 150
Di(2-ethylhexyl)adipate	0.298	0.347	J	ug/L		116	50 - 150
Dibenz(a,h)anthracene	0.0497	0.0419	J	ug/L		84	50 - 150
Diclorvos (DDVP)	0.0497	0.0725		ug/L		146	50 - 150
Dieldrin	0.0995	0.104	J	ug/L		104	50 - 150
Diethylphthalate	0.149	0.167	J	ug/L		112	50 - 150
Dimethylphthalate	0.298	0.322	J	ug/L		108	50 - 150
Di-n-butyl phthalate	0.298	0.365	J	ug/L		122	49 - 243
Di-n-octyl phthalate	0.0995	0.0992		ug/L		100	50 - 150
Endosulfan I (Alpha)	0.0995	0.107		ug/L		107	50 - 150
Endosulfan II (Beta)	0.0995	0.119		ug/L		119	50 - 150
Endosulfan sulfate	0.0995	0.0991		ug/L		100	50 - 150
Endrin	0.0995	0.113		ug/L		113	50 - 150
Endrin aldehyde	0.0995	<0.084		ug/L		76	50 - 150
EPTC	0.0995	0.111		ug/L		112	50 - 150
Fluoranthene	0.0497	0.0518	J	ug/L		104	50 - 150
Fluorene	0.0497	0.0514		ug/L		103	50 - 150
gamma-Chlordane	0.0249	0.0253	J	ug/L		102	50 - 150
Heptachlor	0.0398	0.0527		ug/L		133	50 - 150
Heptachlor epoxide (isomer B)	0.0497	0.0559		ug/L		112	50 - 150
Hexachlorobenzene	0.0497	0.0487	J	ug/L		98	50 - 150
Hexachlorocyclopentadiene	0.0497	0.0537		ug/L		108	50 - 150
Indeno[1,2,3-cd]pyrene	0.0497	0.0417	J	ug/L		84	50 - 150
Isophorone	0.0995	0.115	J	ug/L		116	50 - 150
Lindane	0.0398	0.0430		ug/L		108	50 - 150
Malathion	0.0995	0.105		ug/L		105	50 - 150
Methoxychlor	0.0995	0.108		ug/L		108	50 - 150
Metolachlor	0.0497	0.0612		ug/L		123	50 - 150
Molinate	0.0995	0.120		ug/L		120	50 - 150

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

Lab Sample ID: MRL 380-86272/22-A
Matrix: Water
Analysis Batch: 86505

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 86272

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Naphthalene	0.0995	0.103	J	ug/L		104	50 - 150
Parathion	0.0995	0.0984	J	ug/L		99	50 - 150
Pendimethalin (Penoxaline)	0.0995	0.0935	J	ug/L		94	50 - 150
Phenanthrene	0.0199	0.0210	J	ug/L		106	50 - 150
Propachlor	0.0497	0.0559		ug/L		112	50 - 150
Pyrene	0.0497	0.0533		ug/L		107	50 - 150
Simazine	0.0497	0.0481	J	ug/L		97	50 - 150
Terbacil	0.0995	0.116		ug/L		117	50 - 150
Terbuthylazine	0.0995	0.111		ug/L		111	50 - 150
Thiobencarb	0.0995	0.121	J	ug/L		122	50 - 150
trans-Nonachlor	0.0249	<0.026		ug/L		103	50 - 150
Trifluralin	0.0995	0.104		ug/L		105	50 - 150

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
2-Nitro-m-xylene	*95*		*70 - 130*
Perylene-d12	*95*		*70 - 130*
Triphenylphosphate	*104*		*70 - 130*

Lab Sample ID: 380-90733-B-1-A MS
Matrix: Water
Analysis Batch: 86505

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 86272

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.098		1.96	1.99		ug/L		102	70 - 130
2,4'-DDD	<0.098		1.96	2.17		ug/L		111	70 - 130
2,4'-DDE	<0.098		1.96	2.00		ug/L		102	70 - 130
2,4'-DDT	<0.098		1.96	2.07		ug/L		106	70 - 130
2,4-Dinitrotoluene	<0.098		1.96	1.83		ug/L		93	70 - 130
2,6-Dinitrotoluene	<0.098		1.96	1.85		ug/L		95	70 - 130
2-Methylnaphthalene	<0.098		1.96	2.00		ug/L		102	70 - 130
4,4'-DDD	<0.098		1.96	2.14		ug/L		110	70 - 130
4,4'-DDE	<0.098		1.96	1.90		ug/L		97	70 - 130
4,4'-DDT	<0.098		1.96	1.87		ug/L		95	70 - 130
Acenaphthene	<0.098		1.96	1.88		ug/L		96	70 - 130
Acenaphthylene	<0.098		1.96	1.92		ug/L		98	70 - 130
Acetochlor	<0.098		1.96	2.17		ug/L		111	70 - 130
Alachlor	<0.049		1.96	2.14		ug/L		109	70 - 130
alpha-BHC	<0.098		1.96	2.04		ug/L		104	70 - 130
alpha-Chlordane	<0.049		1.96	1.96		ug/L		100	70 - 130
Anthracene	<0.020	F1	1.96	0.556	F1	ug/L		28	70 - 130
Atrazine	<0.049		1.96	2.19		ug/L		112	70 - 130
Benz(a)anthracene	<0.049		1.96	1.57		ug/L		80	70 - 130
Benzo[a]pyrene	<0.020	F1	1.96	1.32	F1	ug/L		67	70 - 130
Benzo[b]fluoranthene	<0.020		1.96	2.06		ug/L		105	70 - 130
Benzo[g,h,i]perylene	<0.049		1.96	2.09		ug/L		107	70 - 130
Benzo[k]fluoranthene	<0.020		1.96	2.18		ug/L		111	70 - 130
beta-BHC	<0.098		1.96	2.09		ug/L		107	70 - 130
Bis(2-ethylhexyl) phthalate	<0.59		1.96	1.85		ug/L		95	70 - 130

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

Lab Sample ID: 380-90733-B-1-A MS
Matrix: Water
Analysis Batch: 86505

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 86272

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Bromacil	<0.098		1.96	2.41		ug/L		123	70 - 130
Butachlor	<0.049		1.96	2.27		ug/L		116	70 - 130
Butylbenzylphthalate	<0.49		1.96	2.32		ug/L		119	70 - 130
Chlorobenzilate	<0.098		1.96	2.24		ug/L		115	70 - 130
Chloroneb	<0.098		1.96	2.00		ug/L		102	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.098		1.96	2.17		ug/L		111	70 - 130
Chlorpyrifos	<0.049		1.96	2.22		ug/L		114	70 - 130
Chrysene	<0.020		1.96	2.05		ug/L		105	70 - 130
delta-BHC	<0.098		1.96	2.04		ug/L		104	70 - 130
Di(2-ethylhexyl)adipate	<0.59		1.96	2.11		ug/L		108	70 - 130
Dibenz(a,h)anthracene	<0.049		1.96	2.14		ug/L		109	70 - 130
Diclorvos (DDVP)	<0.049		1.96	2.21		ug/L		113	70 - 130
Dieldrin	<0.20		1.96	2.01		ug/L		103	70 - 130
Diethylphthalate	<0.49		1.96	2.09		ug/L		107	70 - 130
Dimethylphthalate	<0.49		1.96	2.09		ug/L		107	70 - 130
Di-n-butyl phthalate	<0.98		3.91	4.42		ug/L		111	70 - 130
Di-n-octyl phthalate	<0.098		1.96	1.62		ug/L		83	70 - 130
Endosulfan I (Alpha)	<0.098		1.96	2.05		ug/L		105	70 - 130
Endosulfan II (Beta)	<0.098		1.96	2.20		ug/L		113	70 - 130
Endosulfan sulfate	<0.098		1.96	2.19		ug/L		112	70 - 130
Endrin	<0.098		1.96	2.16		ug/L		111	70 - 130
Endrin aldehyde	<0.098		1.96	1.96		ug/L		100	60 - 130
EPTC	<0.098		1.96	2.36		ug/L		121	70 - 130
Fluoranthene	<0.098		1.96	2.08		ug/L		106	70 - 130
Fluorene	<0.049		1.96	2.00		ug/L		102	70 - 130
gamma-Chlordane	<0.049		1.96	2.04		ug/L		104	70 - 130
Heptachlor	<0.039		1.96	2.14		ug/L		110	70 - 130
Heptachlor epoxide (isomer B)	<0.049		1.96	2.10		ug/L		107	70 - 130
Hexachlorobenzene	<0.049		1.96	1.86		ug/L		95	70 - 130
Hexachlorocyclopentadiene	<0.049		1.96	2.01		ug/L		103	70 - 130
Indeno[1,2,3-cd]pyrene	<0.049		1.96	2.08		ug/L		106	70 - 130
Isophorone	<0.49		1.96	2.04		ug/L		105	70 - 130
Lindane	<0.039		1.96	2.09		ug/L		107	70 - 130
Malathion	<0.098		1.96	2.23		ug/L		114	70 - 130
Methoxychlor	<0.098		1.96	2.17		ug/L		111	70 - 130
Metolachlor	<0.049		1.96	2.22		ug/L		114	70 - 130
Molinate	<0.098		1.96	2.03		ug/L		104	70 - 130
Naphthalene	<0.29		1.96	1.88		ug/L		96	70 - 130
Parathion	<0.098		1.96	2.08		ug/L		106	70 - 130
Pendimethalin (Penoxaline)	<0.098		1.96	1.95		ug/L		100	70 - 130
Phenanthrene	<0.039		1.96	1.91		ug/L		97	70 - 130
Propachlor	<0.049		1.96	2.17		ug/L		111	70 - 130
Pyrene	<0.049		1.96	2.06		ug/L		105	70 - 130
Simazine	<0.049		1.96	2.21		ug/L		113	70 - 130
Terbacil	<0.098		1.96	2.25		ug/L		115	70 - 130
Terbuthylazine	<0.098		1.96	2.23		ug/L		114	70 - 130
Thiobencarb	<0.20		1.96	2.32		ug/L		118	70 - 130
trans-Nonachlor	<0.049		1.96	1.97		ug/L		101	70 - 130
Trifluralin	<0.098		1.96	1.91		ug/L		97	70 - 130

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

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Nitro-m-xylene	*96*		*70 - 130*
Perylene-d12	*97*		*70 - 130*
Triphenylphosphate	*108*		*70 - 130*

Lab Sample ID: 380-90728-1 DU
Matrix: Drinking Water
Analysis Batch: 86505

Client Sample ID: AIEA GULCH WELLS PUMP 2
Prep Type: Total/NA
Prep Batch: 86272

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
1-Methylnaphthalene	<0.097			<0.098		ug/L				NC	20
2,4'-DDD	<0.097			<0.098		ug/L				NC	20
2,4'-DDE	<0.097			<0.098		ug/L				NC	20
2,4'-DDT	<0.097			<0.098		ug/L				NC	20
2,4-Dinitrotoluene	<0.097			<0.098		ug/L				NC	20
2,6-Dinitrotoluene	<0.097			<0.098		ug/L				NC	20
2-Methylnaphthalene	<0.097			<0.098		ug/L				NC	20
4,4'-DDD	<0.097			<0.098		ug/L				NC	20
4,4'-DDE	<0.097			<0.098		ug/L				NC	20
4,4'-DDT	<0.097			<0.098		ug/L				NC	20
Acenaphthene	<0.097			<0.098		ug/L				NC	20
Acenaphthylene	<0.097			<0.098		ug/L				NC	20
Acetochlor	<0.097			<0.098		ug/L				NC	20
Alachlor	<0.049			<0.049		ug/L				NC	20
alpha-BHC	<0.097			<0.098		ug/L				NC	20
alpha-Chlordane	<0.049			<0.049		ug/L				NC	20
Anthracene	<0.019			<0.020		ug/L				NC	20
Atrazine	<0.049			<0.049		ug/L				NC	20
Benz(a)anthracene	<0.049			<0.049		ug/L				NC	20
Benzo[a]pyrene	<0.019			<0.020		ug/L				NC	20
Benzo[b]fluoranthene	<0.019			<0.020		ug/L				NC	20
Benzo[g,h,i]perylene	<0.049			<0.049		ug/L				NC	20
Benzo[k]fluoranthene	<0.019			<0.020		ug/L				NC	20
beta-BHC	<0.097			<0.098		ug/L				NC	20
Bis(2-ethylhexyl) phthalate	<0.58			<0.59		ug/L				NC	20
Bromacil	<0.097			<0.098		ug/L				NC	20
Butachlor	<0.049			<0.049		ug/L				NC	20
Butylbenzylphthalate	<0.49			<0.49		ug/L				NC	20
Chlorobenzilate	<0.097			<0.098		ug/L				NC	20
Chloroneb	<0.097			<0.098		ug/L				NC	20
Chlorothalonil (Draconil, Bravo)	<0.097			<0.098		ug/L				NC	20
Chlorpyrifos	<0.049			<0.049		ug/L				NC	20
Chrysene	<0.019			<0.020		ug/L				NC	20
delta-BHC	<0.097			<0.098		ug/L				NC	20
Di(2-ethylhexyl)adipate	<0.58			<0.59		ug/L				NC	20
Dibenz(a,h)anthracene	<0.049			<0.049		ug/L				NC	20
Diclorvos (DDVP)	<0.049			<0.049		ug/L				NC	20
Dieldrin	<0.19			<0.20		ug/L				NC	20
Diethylphthalate	<0.49			<0.49		ug/L				NC	20
Dimethylphthalate	<0.49			<0.49		ug/L				NC	20
Di-n-butyl phthalate	<0.97			<0.98		ug/L				NC	20
Di-n-octyl phthalate	<0.097			<0.098		ug/L				NC	20

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

Lab Sample ID: 380-90728-1 DU
Matrix: Drinking Water
Analysis Batch: 86505

Client Sample ID: AIEA GULCH WELLS PUMP 2
Prep Type: Total/NA
Prep Batch: 86272

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Endosulfan I (Alpha)	<0.097			<0.098		ug/L				NC	20
Endosulfan II (Beta)	<0.097			<0.098		ug/L				NC	20
Endosulfan sulfate	<0.097			<0.098		ug/L				NC	20
Endrin	<0.097			<0.098		ug/L				NC	20
Endrin aldehyde	<0.097			<0.098		ug/L				NC	20
EPTC	<0.097			<0.098		ug/L				NC	20
Fluoranthene	<0.097			<0.098		ug/L				NC	20
Fluorene	<0.049			<0.049		ug/L				NC	20
gamma-Chlordane	<0.049			<0.049		ug/L				NC	20
Heptachlor	<0.039			<0.039		ug/L				NC	20
Heptachlor epoxide (isomer B)	<0.049			<0.049		ug/L				NC	20
Hexachlorobenzene	<0.049			<0.049		ug/L				NC	20
Hexachlorocyclopentadiene	<0.049			<0.049		ug/L				NC	20
Indeno[1,2,3-cd]pyrene	<0.049			<0.049		ug/L				NC	20
Isophorone	<0.49			<0.49		ug/L				NC	20
Lindane	<0.039			<0.039		ug/L				NC	20
Malathion	<0.097			<0.098		ug/L				NC	20
Methoxychlor	<0.097			<0.098		ug/L				NC	20
Metolachlor	<0.049			<0.049		ug/L				NC	20
Molinate	<0.097			<0.098		ug/L				NC	20
Naphthalene	<0.29			<0.29		ug/L				NC	20
Parathion	<0.097			<0.098		ug/L				NC	20
Pendimethalin (Penoxaline)	<0.097			<0.098		ug/L				NC	20
Phenanthrene	<0.039			<0.039		ug/L				NC	20
Propachlor	<0.049			<0.049		ug/L				NC	20
Pyrene	<0.049			<0.049		ug/L				NC	20
Simazine	<0.049			<0.049		ug/L				NC	20
Terbacil	<0.097			<0.098		ug/L				NC	20
Terbuthylazine	<0.097			<0.098		ug/L				NC	20
Thiobencarb	<0.19			<0.20		ug/L				NC	20
Total Permethrin (mixed isomers)	<0.19			<0.20		ug/L				NC	20
trans-Nonachlor	<0.049			<0.049		ug/L				NC	20
Trifluralin	<0.097			<0.098		ug/L				NC	20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
2-Nitro-m-xylene	*97*		*70 - 130*
Perylene-d12	*96*		*70 - 130*
Triphenylphosphate	*108*		*70 - 130*

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

Lab Sample ID: MBL 380-85452/21-A
Matrix: Water
Analysis Batch: 85535

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 85452

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		04/11/24 10:22	04/12/24 04:26	1

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

Lab Sample ID: MBL 380-85452/21-A
Matrix: Water
Analysis Batch: 85535

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 85452

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0		ng/L		04/11/24 10:22	04/12/24 04:26	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*85*		*50 - 200*	*04/11/24 10:22*	*04/12/24 04:26*	*1*
13C6 PFDA	*88*		*50 - 200*	*04/11/24 10:22*	*04/12/24 04:26*	*1*
13C5 PFHxA	*88*		*50 - 200*	*04/11/24 10:22*	*04/12/24 04:26*	*1*
13C4 PFHpA	*89*		*50 - 200*	*04/11/24 10:22*	*04/12/24 04:26*	*1*
13C8 PFOA	*91*		*50 - 200*	*04/11/24 10:22*	*04/12/24 04:26*	*1*
13C9 PFNA	*91*		*50 - 200*	*04/11/24 10:22*	*04/12/24 04:26*	*1*
13C7 PFUnA	*86*		*50 - 200*	*04/11/24 10:22*	*04/12/24 04:26*	*1*
13C2 PFDoA	*86*		*50 - 200*	*04/11/24 10:22*	*04/12/24 04:26*	*1*
13C4 PFBA	*89*		*50 - 200*	*04/11/24 10:22*	*04/12/24 04:26*	*1*
13C5 PFPeA	*94*		*50 - 200*	*04/11/24 10:22*	*04/12/24 04:26*	*1*
13C3 PFBS	*93*		*50 - 200*	*04/11/24 10:22*	*04/12/24 04:26*	*1*
13C3 PFHxS	*93*		*50 - 200*	*04/11/24 10:22*	*04/12/24 04:26*	*1*
13C8 PFOS	*92*		*50 - 200*	*04/11/24 10:22*	*04/12/24 04:26*	*1*
13C2-4:2-FTS	*89*		*50 - 200*	*04/11/24 10:22*	*04/12/24 04:26*	*1*

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

Lab Sample ID: MBL 380-85452/21-A
Matrix: Water
Analysis Batch: 85535

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 85452

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-6:2-FTS	86		50 - 200	04/11/24 10:22	04/12/24 04:26	1
13C2-8:2-FTS	73		50 - 200	04/11/24 10:22	04/12/24 04:26	1

Lab Sample ID: LCS 380-85452/23-A
Matrix: Water
Analysis Batch: 85535

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 85452

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.2	56.5		ng/L		94	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.2	53.2		ng/L		88	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.2	53.6		ng/L		89	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.2	56.0		ng/L		93	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.2	53.9		ng/L		89	70 - 130
Perfluorodecanoic acid (PFDA)	60.2	55.7		ng/L		92	70 - 130
Perfluorododecanoic acid (PFDoA)	60.2	56.3		ng/L		93	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.2	55.9		ng/L		93	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.2	56.8		ng/L		94	70 - 130
Perfluorohexanoic acid (PFHxA)	60.2	56.1		ng/L		93	70 - 130
Perfluorononanoic acid (PFNA)	60.2	56.0		ng/L		93	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.2	53.0		ng/L		88	70 - 130
Perfluorooctanoic acid (PFOA)	60.2	54.3		ng/L		90	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.2	55.3		ng/L		92	70 - 130
Perfluorobutanoic acid (PFBA)	60.2	53.1		ng/L		88	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.2	56.6		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.2	56.0		ng/L		93	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.2	55.8		ng/L		93	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.2	62.5		ng/L		104	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.2	51.0		ng/L		85	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.2	55.1		ng/L		91	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.2	55.8		ng/L		93	70 - 130
Perfluoropentanoic acid (PFPeA)	60.2	54.4		ng/L		90	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.2	55.5		ng/L		92	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	60.2	56.1		ng/L		93	70 - 130

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

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C3 HFPO-DA	96		50 - 200
13C6 PFDA	95		50 - 200
13C5 PFHxA	92		50 - 200
13C4 PFHpA	96		50 - 200
13C8 PFOA	97		50 - 200
13C9 PFNA	96		50 - 200
13C7 PFUnA	94		50 - 200
13C2 PFDoA	94		50 - 200
13C4 PFBA	93		50 - 200
13C5 PFPeA	98		50 - 200
13C3 PFBS	97		50 - 200
13C3 PFHxS	97		50 - 200
13C8 PFOS	96		50 - 200
13C2-4:2-FTS	97		50 - 200
13C2-6:2-FTS	91		50 - 200
13C2-8:2-FTS	81		50 - 200

Lab Sample ID: MRL 380-85452/22-A
Matrix: Water
Analysis Batch: 85535

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 85452

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.02	J	ng/L		101	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	1.98	J	ng/L		99	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.90	J	ng/L		95	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.06	J	ng/L		103	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.08	J	ng/L		104	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.22	J	ng/L		111	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.14	J	ng/L		107	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.16	J	ng/L		108	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.13	J	ng/L		106	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.13	J	ng/L		106	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.14	J	ng/L		107	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.21	J	ng/L		110	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.14	J	ng/L		107	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.13	J	ng/L		107	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.08	J	ng/L		104	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.25	J	ng/L		112	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.10	J	ng/L		105	50 - 150

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

Lab Sample ID: MRL 380-85452/22-A
Matrix: Water
Analysis Batch: 85535

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 85452

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)			2.00	2.39	J	ng/L		119	50 - 150		
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)			2.00	1.97	J	ng/L		98	50 - 150		
Perfluoro-3-methoxypropanoic acid (PFMPA)			2.00	2.06	J	ng/L		103	50 - 150		
Perfluoro-4-methoxybutanoic acid (PFMBA)			2.00	2.04	J	ng/L		102	50 - 150		
Perfluoropentanoic acid (PFPeA)			2.00	2.06	J	ng/L		103	50 - 150		
Perfluoroheptanesulfonic acid (PFHpS)			2.00	2.04	J	ng/L		102	50 - 150		
Perfluoropentanesulfonic acid (PFPeS)			2.00	1.96	J	ng/L		98	50 - 150		

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C3 HFPO-DA	*86*		*50 - 200*
13C6 PFDA	*89*		*50 - 200*
13C5 PFHxA	*88*		*50 - 200*
13C4 PFHpA	*92*		*50 - 200*
13C8 PFOA	*90*		*50 - 200*
13C9 PFNA	*92*		*50 - 200*
13C7 PFUnA	*87*		*50 - 200*
13C2 PFDoA	*86*		*50 - 200*
13C4 PFBA	*89*		*50 - 200*
13C5 PFPeA	*94*		*50 - 200*
13C3 PFBS	*93*		*50 - 200*
13C3 PFHxS	*91*		*50 - 200*
13C8 PFOS	*91*		*50 - 200*
13C2-4:2-FTS	*92*		*50 - 200*
13C2-6:2-FTS	*83*		*50 - 200*
13C2-8:2-FTS	*75*		*50 - 200*

Lab Sample ID: 380-90682-B-1-B MS
Matrix: Water
Analysis Batch: 85535

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 85452

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.5	57.9		ng/L		96	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.5	54.5		ng/L		90	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.5	55.5		ng/L		92	70 - 130		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.5	61.8		ng/L		102	70 - 130		
Perfluorobutanesulfonic acid (PFBS)	4.3		60.5	61.5		ng/L		95	70 - 130		
Perfluorodecanoic acid (PFDA)	<2.0		60.5	57.6		ng/L		95	70 - 130		
Perfluorododecanoic acid (PFDoA)	<2.0		60.5	59.3		ng/L		98	70 - 130		

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

Lab Sample ID: 380-90682-B-1-B MS
Matrix: Water
Analysis Batch: 85535

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 85452

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanoic acid (PFHpA)	<2.0		60.5	60.2		ng/L		98	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	5.4		60.5	65.1		ng/L		99	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		60.5	60.9		ng/L		98	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.5	60.6		ng/L		99	70 - 130
Perfluorooctanesulfonic acid (PFOS)	7.8		60.5	65.0		ng/L		94	70 - 130
Perfluorooctanoic acid (PFOA)	4.3		60.5	65.0		ng/L		100	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.5	57.4		ng/L		95	70 - 130
Perfluorobutanoic acid (PFBA)	4.7		60.5	61.5		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.5	61.3		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.5	59.8		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.5	60.8		ng/L		101	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.5	73.6		ng/L		122	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		60.5	57.4		ng/L		95	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.5	70.4		ng/L		116	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.5	57.4		ng/L		95	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		60.5	58.8		ng/L		95	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.5	59.1		ng/L		98	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.5	59.8		ng/L		98	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C3 HFPO-DA	*77*		*50 - 200*
13C6 PFDA	*74*		*50 - 200*
13C5 PFHxA	*76*		*50 - 200*
13C4 PFHpA	*76*		*50 - 200*
13C8 PFOA	*73*		*50 - 200*
13C9 PFNA	*75*		*50 - 200*
13C7 PFUnA	*72*		*50 - 200*
13C2 PFDoA	*70*		*50 - 200*
13C4 PFBA	*84*		*50 - 200*
13C5 PFPeA	*121*		*50 - 200*
13C3 PFBS	*89*		*50 - 200*
13C3 PFHxS	*91*		*50 - 200*
13C8 PFOS	*89*		*50 - 200*
13C2-4:2-FTS	*118*		*50 - 200*
13C2-6:2-FTS	*93*		*50 - 200*
13C2-8:2-FTS	*74*		*50 - 200*

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

Lab Sample ID: 380-90682-C-1-B MSD
Matrix: Water
Analysis Batch: 85535

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 85452

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.4	59.9		ng/L		99	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.4	56.2		ng/L		93	70 - 130	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.4	53.9		ng/L		89	70 - 130	3	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.4	61.6		ng/L		102	70 - 130	0	30
Perfluorobutanesulfonic acid (PFBS)	4.3		60.4	63.6		ng/L		98	70 - 130	3	30
Perfluorodecanoic acid (PFDA)	<2.0		60.4	59.6		ng/L		99	70 - 130	4	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.4	62.1		ng/L		103	70 - 130	5	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.4	59.7		ng/L		97	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)	5.4		60.4	66.7		ng/L		102	70 - 130	3	30
Perfluorohexanoic acid (PFHxA)	<2.0		60.4	62.2		ng/L		100	70 - 130	2	30
Perfluorononanoic acid (PFNA)	<2.0		60.4	61.1		ng/L		100	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	7.8		60.4	67.0		ng/L		98	70 - 130	3	30
Perfluorooctanoic acid (PFOA)	4.3		60.4	65.4		ng/L		101	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.4	58.5		ng/L		97	70 - 130	2	30
Perfluorobutanoic acid (PFBA)	4.7		60.4	62.1		ng/L		95	70 - 130	1	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.4	62.6		ng/L		104	70 - 130	2	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.4	60.3		ng/L		100	70 - 130	1	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.4	59.7		ng/L		99	70 - 130	2	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.4	62.6		ng/L		104	70 - 130	16	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		60.4	55.8		ng/L		92	70 - 130	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.4	69.6		ng/L		115	70 - 130	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.4	58.3		ng/L		97	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)	<2.0		60.4	60.5		ng/L		98	70 - 130	3	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.4	60.1		ng/L		100	70 - 130	2	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.4	61.5		ng/L		101	70 - 130	3	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C3 HFPO-DA	*76*		*50 - 200*
13C6 PFDA	*72*		*50 - 200*
13C5 PFHxA	*77*		*50 - 200*
13C4 PFHpA	*76*		*50 - 200*
13C8 PFOA	*73*		*50 - 200*
13C9 PFNA	*76*		*50 - 200*

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

Lab Sample ID: 380-90682-C-1-B MSD
Matrix: Water
Analysis Batch: 85535

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 85452

Isotope Dilution	MSD %Recovery	MSD Qualifier	Limits
13C7 PFUnA	70		50 - 200
13C2 PFDoA	63		50 - 200
13C4 PFBA	83		50 - 200
13C5 PFPeA	118		50 - 200
13C3 PFBS	84		50 - 200
13C3 PFHxS	88		50 - 200
13C8 PFOS	87		50 - 200
13C2-4:2-FTS	115		50 - 200
13C2-6:2-FTS	90		50 - 200
13C2-8:2-FTS	71		50 - 200

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

Lab Sample ID: MBL 380-85410/21-A
Matrix: Water
Analysis Batch: 85521

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 85410

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		04/11/24 06:45	04/12/24 00:59	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		04/11/24 06:45	04/12/24 00:59	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		04/11/24 06:45	04/12/24 00:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0		ng/L		04/11/24 06:45	04/12/24 00:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0		ng/L		04/11/24 06:45	04/12/24 00:59	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		04/11/24 06:45	04/12/24 00:59	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		04/11/24 06:45	04/12/24 00:59	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		04/11/24 06:45	04/12/24 00:59	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		04/11/24 06:45	04/12/24 00:59	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		04/11/24 06:45	04/12/24 00:59	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		04/11/24 06:45	04/12/24 00:59	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		04/11/24 06:45	04/12/24 00:59	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		04/11/24 06:45	04/12/24 00:59	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0		ng/L		04/11/24 06:45	04/12/24 00:59	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0		ng/L		04/11/24 06:45	04/12/24 00:59	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		04/11/24 06:45	04/12/24 00:59	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		04/11/24 06:45	04/12/24 00:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		04/11/24 06:45	04/12/24 00:59	1

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	99		70 - 130	04/11/24 06:45	04/12/24 00:59	1
13C2 PFHxA	101		70 - 130	04/11/24 06:45	04/12/24 00:59	1
13C2 PFDA	102		70 - 130	04/11/24 06:45	04/12/24 00:59	1
13C3-GenX	96		70 - 130	04/11/24 06:45	04/12/24 00:59	1

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

Lab Sample ID: LCS 380-85410/23-A
Matrix: Water
Analysis Batch: 85521

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 85410

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	50.1	50.9		ng/L		102	70 - 130
Perfluorooctanesulfonic acid (PFOS)	50.1	54.7		ng/L		109	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.1	52.0		ng/L		104	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.1	53.7		ng/L		107	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.1	49.8		ng/L		99	70 - 130
Perfluorohexanoic acid (PFHxA)	50.1	54.9		ng/L		110	70 - 130
Perfluorododecanoic acid (PFDoA)	50.1	54.1		ng/L		108	70 - 130
Perfluorooctanoic acid (PFOA)	50.1	54.7		ng/L		109	70 - 130
Perfluorodecanoic acid (PFDA)	50.1	55.7		ng/L		111	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.1	58.9		ng/L		118	70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.1	49.2		ng/L		98	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.1	55.5		ng/L		111	70 - 130
Perfluorononanoic acid (PFNA)	50.1	53.0		ng/L		106	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.1	54.7		ng/L		109	70 - 130
Perfluorotridecanoic acid (PFTrDA)	50.1	55.3		ng/L		110	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	50.1	57.7		ng/L		115	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	50.1	54.8		ng/L		109	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.1	55.1		ng/L		110	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
d5-NEtFOSAA	*103*		*70 - 130*
13C2 PFHxA	*112*		*70 - 130*
13C2 PFDA	*111*		*70 - 130*
13C3-GenX	*111*		*70 - 130*

Lab Sample ID: MRL 380-85410/22-A
Matrix: Water
Analysis Batch: 85521

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 85410

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.13	J	ng/L		106	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.44	J	ng/L		122	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.34	J	ng/L		116	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.01	2.30	J	ng/L		115	50 - 150

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

Lab Sample ID: MRL 380-85410/22-A
Matrix: Water
Analysis Batch: 85521

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 85410

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.01	2.23	J	ng/L		111	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.31	J	ng/L		115	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.42	J	ng/L		121	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.46	J	ng/L		123	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.44	J	ng/L		122	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.37	J	ng/L		118	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.19	J	ng/L		109	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.42	J	ng/L		120	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.49	J	ng/L		124	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.01	2.45	J	ng/L		122	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.01	2.52	J	ng/L		126	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	2.38	J	ng/L		119	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.30	J	ng/L		115	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	2.41	J	ng/L		120	50 - 150

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

Lab Sample ID: 380-90728-2 LMS
Matrix: Drinking Water
Analysis Batch: 85521

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) Pump #1
Prep Type: Total/NA
Prep Batch: 85410

Analyte	Sample Result	Sample Qualifier	Spike Added	LMS Result	LMS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.01	2.08		ng/L		103	50 - 150
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.01	2.70		ng/L		134	50 - 150
Perfluoroundecanoic acid (PFUnA)	<2.0		2.01	2.28		ng/L		113	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.01	2.40		ng/L		119	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.01	2.18		ng/L		108	50 - 150
Perfluorohexanoic acid (PFHxA)	<2.0		2.01	2.95		ng/L		114	50 - 150
Perfluorododecanoic acid (PFDoA)	<2.0		2.01	2.42		ng/L		120	50 - 150
Perfluorooctanoic acid (PFOA)	<2.0		2.01	2.83		ng/L		113	50 - 150
Perfluorodecanoic acid (PFDA)	<2.0		2.01	2.36		ng/L		117	50 - 150

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

Lab Sample ID: 380-90728-2 LMS
Matrix: Drinking Water
Analysis Batch: 85521

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) Pump #1
Prep Type: Total/NA
Prep Batch: 85410

Analyte	Sample Result	Sample Qualifier	Spike Added	LMS Result	LMS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.01	3.22		ng/L		125	50 - 150
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.01	2.78		ng/L		138	50 - 150
Perfluoroheptanoic acid (PFHpA)	<2.0		2.01	2.66		ng/L		132	50 - 150
Perfluorononanoic acid (PFNA)	<2.0		2.01	2.38		ng/L		118	50 - 150
Perfluorotetradecanoic acid (PFTA)	<2.0		2.01	2.39		ng/L		119	50 - 150
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.01	2.31		ng/L		115	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.01	2.46		ng/L		122	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.01	2.30		ng/L		114	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.01	2.51		ng/L		125	50 - 150

Surrogate	*LMS %Recovery*	*LMS Qualifier*	*Limits*
d5-NEtFOSAA	*101*		*70 - 130*
13C2 PFHxA	*104*		*70 - 130*
13C2 PFDA	*108*		*70 - 130*
13C3-GenX	*102*		*70 - 130*

Lab Sample ID: 380-90728-2 LMSD
Matrix: Drinking Water
Analysis Batch: 85521

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) Pump #1
Prep Type: Total/NA
Prep Batch: 85410

Analyte	Sample Result	Sample Qualifier	Spike Added	LMSD Result	LMSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.01	2.15		ng/L		107	50 - 150	4	50
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.01	2.69		ng/L		133	50 - 150	0	50
Perfluoroundecanoic acid (PFUnA)	<2.0		2.01	2.30		ng/L		114	50 - 150	1	50
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.01	2.43		ng/L		121	50 - 150	1	50
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.01	2.25		ng/L		112	50 - 150	3	50
Perfluorohexanoic acid (PFHxA)	<2.0		2.01	3.06		ng/L		120	50 - 150	4	50
Perfluorododecanoic acid (PFDoA)	<2.0		2.01	2.38		ng/L		118	50 - 150	2	50
Perfluorooctanoic acid (PFOA)	<2.0		2.01	2.93		ng/L		118	50 - 150	4	50
Perfluorodecanoic acid (PFDA)	<2.0		2.01	2.41		ng/L		120	50 - 150	2	50
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.01	2.95		ng/L		111	50 - 150	9	50
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.01	2.61		ng/L		129	50 - 150	6	50
Perfluoroheptanoic acid (PFHpA)	<2.0		2.01	2.69		ng/L		134	50 - 150	1	50
Perfluorononanoic acid (PFNA)	<2.0		2.01	2.43		ng/L		121	50 - 150	2	50
Perfluorotetradecanoic acid (PFTA)	<2.0		2.01	2.37		ng/L		118	50 - 150	1	50

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

Lab Sample ID: 380-90728-2 LMSD
Matrix: Drinking Water
Analysis Batch: 85521

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) Pump #1
Prep Type: Total/NA
Prep Batch: 85410

Analyte	Sample Result	Sample Qualifier	Spike Added	LMSD Result	LMSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.01	2.40		ng/L		119	50 - 150	4	50
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.01	2.39		ng/L		119	50 - 150	3	50
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.01	2.31		ng/L		115	50 - 150	1	50
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.01	2.52		ng/L		125	50 - 150	0	50

Surrogate	*LMSD %Recovery*	*LMSD Qualifier*	*Limits*
d5-NEtFOSAA	*108*		*70 - 130*
13C2 PFHxA	*115*		*70 - 130*
13C2 PFDA	*111*		*70 - 130*
13C3-GenX	*106*		*70 - 130*

GC/MS Semi VOA

Prep Batch: 86272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-90728-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	
380-90728-2	AIEA WELLS PUMPS 1&2 (260) Pump #1	Total/NA	Drinking Water	525.2	
MB 380-86272/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-86272/23-A	Lab Control Sample	Total/NA	Water	525.2	
MRL 380-86272/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-90733-B-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-90728-1 DU	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	

Analysis Batch: 86505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-90728-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	86272
380-90728-2	AIEA WELLS PUMPS 1&2 (260) Pump #1	Total/NA	Drinking Water	525.2	86272
MB 380-86272/21-A	Method Blank	Total/NA	Water	525.2	86272
LCS 380-86272/23-A	Lab Control Sample	Total/NA	Water	525.2	86272
MRL 380-86272/22-A	Lab Control Sample	Total/NA	Water	525.2	86272
380-90733-B-1-A MS	Matrix Spike	Total/NA	Water	525.2	86272
380-90728-1 DU	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	86272

LCMS

Prep Batch: 85410

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-90728-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	537.1 DW	
380-90728-2	AIEA WELLS PUMPS 1&2 (260) Pump #1	Total/NA	Drinking Water	537.1 DW	
380-90728-3	FB: AIEA GULCH WELLS PUMP 2	Total/NA	Water	537.1 DW	
380-90728-4	FB: AIEA WELLS PUMPS 1&2 (260) Pump #1	Total/NA	Water	537.1 DW	
MBL 380-85410/21-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-85410/23-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-85410/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-90728-2 LMS	AIEA WELLS PUMPS 1&2 (260) Pump #1	Total/NA	Drinking Water	537.1 DW	
380-90728-2 LMSD	AIEA WELLS PUMPS 1&2 (260) Pump #1	Total/NA	Drinking Water	537.1 DW	

Prep Batch: 85452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-90728-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	533	
380-90728-2	AIEA WELLS PUMPS 1&2 (260) Pump #1	Total/NA	Drinking Water	533	
380-90728-4	FB: AIEA WELLS PUMPS 1&2 (260) Pump #1	Total/NA	Water	533	
MBL 380-85452/21-A	Method Blank	Total/NA	Water	533	
LCS 380-85452/23-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-85452/22-A	Lab Control Sample	Total/NA	Water	533	
380-90682-B-1-B MS	Matrix Spike	Total/NA	Water	533	
380-90682-C-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 85521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-90728-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	537.1	85410
380-90728-2	AIEA WELLS PUMPS 1&2 (260) Pump #1	Total/NA	Drinking Water	537.1	85410
380-90728-3	FB: AIEA GULCH WELLS PUMP 2	Total/NA	Water	537.1	85410
380-90728-4	FB: AIEA WELLS PUMPS 1&2 (260) Pump #1	Total/NA	Water	537.1	85410
MBL 380-85410/21-A	Method Blank	Total/NA	Water	537.1	85410
LCS 380-85410/23-A	Lab Control Sample	Total/NA	Water	537.1	85410

LCMS (Continued)

Analysis Batch: 85521 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 380-85410/22-A	Lab Control Sample	Total/NA	Water	537.1	85410
380-90728-2 LMS	AIEA WELLS PUMPS 1&2 (260) Pump #1	Total/NA	Drinking Water	537.1	85410
380-90728-2 LMSD	AIEA WELLS PUMPS 1&2 (260) Pump #1	Total/NA	Drinking Water	537.1	85410

Analysis Batch: 85535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-90728-1	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	533	85452
380-90728-2	AIEA WELLS PUMPS 1&2 (260) Pump #1	Total/NA	Drinking Water	533	85452
380-90728-4	FB: AIEA WELLS PUMPS 1&2 (260) Pump #1	Total/NA	Water	533	85452
MBL 380-85452/21-A	Method Blank	Total/NA	Water	533	85452
LCS 380-85452/23-A	Lab Control Sample	Total/NA	Water	533	85452
MRL 380-85452/22-A	Lab Control Sample	Total/NA	Water	533	85452
380-90682-B-1-B MS	Matrix Spike	Total/NA	Water	533	85452
380-90682-C-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	533	85452

Lab Chronicle

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

Job ID: 380-90728-1
SDG: 525.2, 533, 537.1

Client Sample ID: AIEA GULCH WELLS PUMP 2
Lab Sample ID: 380-90728-1
Date Collected: 04/08/24 08:55
Matrix: Drinking Water
Date Received: 04/10/24 10:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			86272	KRD3	EA POM	04/17/24 10:00
Total/NA	Analysis	525.2		1	86505	UPAC	EA POM	04/18/24 09:54
Total/NA	Prep	533			85452	A5GB	EA POM	04/11/24 10:22
Total/NA	Analysis	533		1	85535	Y5FM	EA POM	04/12/24 08:01
Total/NA	Prep	537.1 DW			85410	SL5Q	EA POM	04/11/24 06:45
Total/NA	Analysis	537.1		1	85521	SZ9R	EA POM	04/12/24 04:16

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) Pump #1
Lab Sample ID: 380-90728-2
Date Collected: 04/08/24 09:30
Matrix: Drinking Water
Date Received: 04/10/24 10:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			86272	KRD3	EA POM	04/17/24 10:00
Total/NA	Analysis	525.2		1	86505	UPAC	EA POM	04/18/24 11:34
Total/NA	Prep	533			85452	A5GB	EA POM	04/11/24 10:22
Total/NA	Analysis	533		1	85535	Y5FM	EA POM	04/12/24 08:12
Total/NA	Prep	537.1 DW			85410	SL5Q	EA POM	04/11/24 06:45
Total/NA	Analysis	537.1		1	85521	SZ9R	EA POM	04/12/24 01:29

Client Sample ID: FB: AIEA GULCH WELLS PUMP 2
Lab Sample ID: 380-90728-3
Date Collected: 04/08/24 08:55
Matrix: Water
Date Received: 04/10/24 10:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			85410	SL5Q	EA POM	04/11/24 06:45
Total/NA	Analysis	537.1		1	85521	SZ9R	EA POM	04/12/24 04:26

Client Sample ID: FB: AIEA WELLS PUMPS 1&2 (260) Pump #1
Lab Sample ID: 380-90728-4
Date Collected: 04/08/24 09:30
Matrix: Water
Date Received: 04/10/24 10:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			85452	A5GB	EA POM	04/11/24 10:22
Total/NA	Analysis	533		1	85535	Y5FM	EA POM	04/12/24 08:33
Total/NA	Prep	537.1 DW			85410	SL5Q	EA POM	04/11/24 06:45
Total/NA	Analysis	537.1		1	85521	SZ9R	EA POM	04/12/24 04:36

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: 380-90728-1
SDG: 525.2, 533, 537.1

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	02-12-24 *

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

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

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)

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

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

Job ID: 380-90728-1
SDG: 525.2, 533, 537.1

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)

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

Method Summary

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

Job ID: 380-90728-1
SDG: 525.2, 533, 537.1

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: 380-90728-1
SDG: 525.2, 533, 537.1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-90728-1	AIEA GULCH WELLS PUMP 2	Drinking Water	04/08/24 08:55	04/10/24 10:17
380-90728-2	AIEA WELLS PUMPS 1&2 (260) Pump #1	Drinking Water	04/08/24 09:30	04/10/24 10:17
380-90728-3	FB: AIEA GULCH WELLS PUMP 2	Water	04/08/24 08:55	04/10/24 10:17
380-90728-4	FB: AIEA WELLS PUMPS 1&2 (260) Pump #1	Water	04/08/24 09:30	04/10/24 10:17

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Olaf Happe	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-27994-2757
Client Contact: Dr. Ron Fenstemacher	Phone: 808-748-5840	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: City and County of Honolulu	PWSID:			Job #:
Address: 630 South Beretania St. Chemistry Lab	Due Date Requested:			
City: Honolulu	TAT Requested (days): Standard			
State, Zip: Hawaii 96843	Compliance Project: Δ Yes Δ No			
Phone: 808-748-5841	PO #: C20525101 exp 05312023			
Email: RFENSTEMACHER@hbws.org	WO #:			
Project Name: RED HILL/HBWS Sites Event Desc: RUSH Weekly Red Hill	Project #: 38001111			
Site: Hawaii	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: ammonium acetate

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 (Purgeable) LL (EAL)	SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil	525.2_PREC - (MOD) 525 plus 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	RA	RA	QA	RA	Y	Z		
MOANALUA WELLS			G	Water											
AIEA GULCH WELLS PUMP 2	4/8/24	855	G	Water			2		2	2	4	3	3		Chlorinated
AIEA WELLS PUMPS 1&2 (260) Pump #1	4/8/24	930	G	Water			2		2	2	4	3	3		
HALAWA WELLS UNIT 1&2 (write pump number)			G	Water											
TB: MOANALUA WELLS				Water											
TB: AIEA GULCH WELLS PUMP 2				Water							2				380-90728 COC
TB: AIEA WELLS PUMPS 1&2 (260) PUMP 1				Water							2				
TB: HALAWA WELLS UNIT 1&2				Water											
FB: AIEA GULCH WELLS PUMP 2	4/8/24	855										1	1		
FB: AIEA WELLS PUMPS 1 &2 (260) PUMP #1	4/8/24	930										1	1		FB bottle accidentally switched with sample. Plese see the corrected labels on the bottles

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

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

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: FED EX 7758 8718 1784

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[redacted]	4-8-24 1200	HBWS	G REITNER	04/10/2024 10:17	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: (757A) 1.4°-0.1°-1.3° GEL FROZEN

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-90728-1
SDG Number: 525.2, 533, 537.1

Login Number: 90728
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	