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ANALYTICAL REPORT

PREPARED FOR

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

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JOB DESCRIPTION

RED-HILL
RUSH Weekly Red Hill

JOB NUMBER

380-60202-1

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

See page two for job notes and contact information.

Eurofins Eaton Analytical Pomona

Job Notes

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

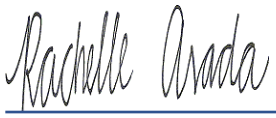

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Table of Contents

Definitions/Glossary

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

Job ID: 380-60202-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA TICs

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

LCMS

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

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

Job ID: 380-60202-1

Job ID: 380-60202-1

Laboratory: Eurofins Eaton Analytical Pomona

Narrative

Job Narrative
380-60202-1

Receipt
The samples were received on 8/23/2023 10:25 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 0.8º C, 3.9º C, 4.4º C and 5.7º C.

GC/MS Semi VOA
Method 525.2: The continuing calibration verification (CCV) associated with batch 380-53371 recovered above the upper control limit for 2,4-Dinitrotoluene and Parathion. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: AIEA WELLS PUMPS 1&2 (260) P2 (380-60202-1) and AIEA GULCH WELLS PUMP 2 (380-60202-2).

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

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

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

Detection Summary

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

Job ID: 380-60202-1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2 — Lab Sample ID: 380-60202-1

No Detections.

Client Sample ID: AIEA GULCH WELLS PUMP 2 — Lab Sample ID: 380-60202-2

No Detections.

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260) P2 — Lab Sample ID: 380-60202-5

No Detections.

Client Sample ID: FB AIEA GULCH WELLS PUMP 2 — Lab Sample ID: 380-60202-6

No Detections.

This Detection Summary does not include radiochemical test results.

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

Job ID: 380-60202-1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
Date Collected: 08/21/23 11:14
Date Received: 08/23/23 10:25

Lab Sample ID: 380-60202-1
Matrix: Drinking Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
2,4'-DDD	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
2,4'-DDE	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
2,4'-DDT	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
2,4-Dinitrotoluene	<0.098	^3+ *+	0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
2,6-Dinitrotoluene	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
2-Methylnaphthalene	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
4,4'-DDD	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
4,4'-DDE	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
4,4'-DDT	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Acenaphthene	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Acenaphthylene	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Acetochlor	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Alachlor	<0.049		0.049		ug/L		08/25/23 07:45	08/26/23 18:08	1
alpha-BHC	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
alpha-Chlordane	<0.049		0.049		ug/L		08/25/23 07:45	08/26/23 18:08	1
Anthracene	<0.020		0.020		ug/L		08/25/23 07:45	08/26/23 18:08	1
Atrazine	<0.049	*+	0.049		ug/L		08/25/23 07:45	08/26/23 18:08	1
Benz(a)anthracene	<0.049		0.049		ug/L		08/25/23 07:45	08/26/23 18:08	1
Benzo[a]pyrene	<0.020		0.020		ug/L		08/25/23 07:45	08/26/23 18:08	1
Benzo[b]fluoranthene	<0.020		0.020		ug/L		08/25/23 07:45	08/26/23 18:08	1
Benzo[g,h,i]perylene	<0.049		0.049		ug/L		08/25/23 07:45	08/26/23 18:08	1
Benzo[k]fluoranthene	<0.020		0.020		ug/L		08/25/23 07:45	08/26/23 18:08	1
beta-BHC	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59		ug/L		08/25/23 07:45	08/26/23 18:08	1
Bromacil	<0.098	^3+	0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Butachlor	<0.049	^3+	0.049		ug/L		08/25/23 07:45	08/26/23 18:08	1
Butylbenzylphthalate	<0.49		0.49		ug/L		08/25/23 07:45	08/26/23 18:08	1
Chlorobenzilate	<0.098	^3+ *+	0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Chloroneb	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Chlorothalonil (Draconil, Bravo)	<0.098	^3+	0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Chlorpyrifos	<0.049		0.049		ug/L		08/25/23 07:45	08/26/23 18:08	1
Chrysene	<0.020		0.020		ug/L		08/25/23 07:45	08/26/23 18:08	1
delta-BHC	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Di(2-ethylhexyl)adipate	<0.59		0.59		ug/L		08/25/23 07:45	08/26/23 18:08	1
Dibenz(a,h)anthracene	<0.049		0.049		ug/L		08/25/23 07:45	08/26/23 18:08	1
Diclorvos (DDVP)	<0.049		0.049		ug/L		08/25/23 07:45	08/26/23 18:08	1
Dieldrin	<0.20		0.20		ug/L		08/25/23 07:45	08/26/23 18:08	1
Diethylphthalate	<0.49		0.49		ug/L		08/25/23 07:45	08/26/23 18:08	1
Dimethylphthalate	<0.49		0.49		ug/L		08/25/23 07:45	08/26/23 18:08	1
Di-n-butyl phthalate	<0.98		0.98		ug/L		08/25/23 07:45	08/26/23 18:08	1
Di-n-octyl phthalate	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Endosulfan I (Alpha)	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Endosulfan II (Beta)	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Endosulfan sulfate	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Endrin	<0.098	*+	0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Endrin aldehyde	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
EPTC	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Fluoranthene	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
Date Collected: 08/21/23 11:14
Date Received: 08/23/23 10:25

Lab Sample ID: 380-60202-1
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		08/25/23 07:45	08/26/23 18:08	1
gamma-Chlordane	<0.049		0.049		ug/L		08/25/23 07:45	08/26/23 18:08	1
Heptachlor	<0.039		0.039		ug/L		08/25/23 07:45	08/26/23 18:08	1
Heptachlor epoxide (isomer B)	<0.049		0.049		ug/L		08/25/23 07:45	08/26/23 18:08	1
Hexachlorobenzene	<0.049		0.049		ug/L		08/25/23 07:45	08/26/23 18:08	1
Hexachlorocyclopentadiene	<0.049		0.049		ug/L		08/25/23 07:45	08/26/23 18:08	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049		ug/L		08/25/23 07:45	08/26/23 18:08	1
Isophorone	<0.49		0.49		ug/L		08/25/23 07:45	08/26/23 18:08	1
Lindane	<0.039		0.039		ug/L		08/25/23 07:45	08/26/23 18:08	1
Malathion	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Methoxychlor	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Metolachlor	<0.049		0.049		ug/L		08/25/23 07:45	08/26/23 18:08	1
Molinate	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Naphthalene	<0.29		0.29		ug/L		08/25/23 07:45	08/26/23 18:08	1
Parathion	<0.098	^3+ *+	0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Pendimethalin (Penoxaline)	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Phenanthrene	<0.039		0.039		ug/L		08/25/23 07:45	08/26/23 18:08	1
Propachlor	<0.049		0.049		ug/L		08/25/23 07:45	08/26/23 18:08	1
Pyrene	<0.049		0.049		ug/L		08/25/23 07:45	08/26/23 18:08	1
Simazine	<0.049	*+	0.049		ug/L		08/25/23 07:45	08/26/23 18:08	1
Terbacil	<0.098	^3+ *+	0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Terbuthylazine	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1
Thiobencarb	<0.20		0.20		ug/L		08/25/23 07:45	08/26/23 18:08	1
Total Permethrin (mixed isomers)	<0.20		0.20		ug/L		08/25/23 07:45	08/26/23 18:08	1
trans-Nonachlor	<0.049		0.049		ug/L		08/25/23 07:45	08/26/23 18:08	1
Trifluralin	<0.098		0.098		ug/L		08/25/23 07:45	08/26/23 18:08	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*			*N/A*	*08/25/23 07:45*	*08/26/23 18:08*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*98*		*70 - 130*	*08/25/23 07:45*	*08/26/23 18:08*	*1*
Perylene-d12	*96*		*70 - 130*	*08/25/23 07:45*	*08/26/23 18:08*	*1*
Triphenylphosphate	*105*		*70 - 130*	*08/25/23 07:45*	*08/26/23 18:08*	*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		09/06/23 16:30	09/09/23 17:41	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1

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

Job ID: 380-60202-1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
Date Collected: 08/21/23 11:14
Date Received: 08/23/23 10:25

Lab Sample ID: 380-60202-1
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		09/06/23 16:30	09/09/23 17:41	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:41	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*87*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:41*	*1*
13C6 PFDA	*96*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:41*	*1*
13C5 PFHxA	*102*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:41*	*1*
13C4 PFHpA	*118*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:41*	*1*
13C8 PFOA	*102*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:41*	*1*
13C9 PFNA	*103*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:41*	*1*
13C7 PFUnA	*97*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:41*	*1*
13C2 PFDoA	*96*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:41*	*1*
13C4 PFBA	*95*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:41*	*1*
13C5 PFPeA	*91*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:41*	*1*
13C3 PFBS	*102*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:41*	*1*
13C3 PFHxS	*103*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:41*	*1*
13C8 PFOS	*98*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:41*	*1*
13C2-4:2-FTS	*90*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:41*	*1*
13C2-6:2-FTS	*80*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:41*	*1*
13C2-8:2-FTS	*77*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:41*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 16:32	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 16:32	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 16:32	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 16:32	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 16:32	1

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

Lab Sample ID: 380-60202-1

Date Collected: 08/21/23 11:14

Matrix: Drinking Water

Date Received: 08/23/23 10:25

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		08/28/23 07:58	08/29/23 16:32	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 16:32	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 16:32	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 16:32	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 16:32	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 16:32	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 16:32	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 16:32	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 16:32	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 16:32	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 16:32	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 16:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*108*		*70 - 130*	*08/28/23 07:58*	*08/29/23 16:32*	*1*
13C2 PFHxA	*107*		*70 - 130*	*08/28/23 07:58*	*08/29/23 16:32*	*1*
13C2 PFDA	*112*		*70 - 130*	*08/28/23 07:58*	*08/29/23 16:32*	*1*
13C3-GenX	*113*		*70 - 130*	*08/28/23 07:58*	*08/29/23 16:32*	*1*

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-60202-2

Date Collected: 08/21/23 10:39

Matrix: Drinking Water

Date Received: 08/23/23 10:25

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
2,4'-DDD	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
2,4'-DDE	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
2,4'-DDT	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
2,4-Dinitrotoluene	<0.098	^3+ *+	0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
2,6-Dinitrotoluene	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
2-Methylnaphthalene	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
4,4'-DDD	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
4,4'-DDE	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
4,4'-DDT	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Acenaphthene	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Acenaphthylene	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Acetochlor	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Alachlor	<0.049		0.049		ug/L		08/25/23 09:10	08/26/23 18:28	1
alpha-BHC	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
alpha-Chlordane	<0.049		0.049		ug/L		08/25/23 09:10	08/26/23 18:28	1
Anthracene	<0.020		0.020		ug/L		08/25/23 09:10	08/26/23 18:28	1
Atrazine	<0.049	*+	0.049		ug/L		08/25/23 09:10	08/26/23 18:28	1
Benz(a)anthracene	<0.049		0.049		ug/L		08/25/23 09:10	08/26/23 18:28	1
Benzo[a]pyrene	<0.020		0.020		ug/L		08/25/23 09:10	08/26/23 18:28	1
Benzo[b]fluoranthene	<0.020		0.020		ug/L		08/25/23 09:10	08/26/23 18:28	1
Benzo[g,h,i]perylene	<0.049		0.049		ug/L		08/25/23 09:10	08/26/23 18:28	1

Client Sample ID: AIEA GULCH WELLS PUMP 2
Date Collected: 08/21/23 10:39
Date Received: 08/23/23 10:25

Lab Sample ID: 380-60202-2
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	<0.020		0.020		ug/L		08/25/23 09:10	08/26/23 18:28	1
beta-BHC	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59		ug/L		08/25/23 09:10	08/26/23 18:28	1
Bromacil	<0.098	^3+	0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Butachlor	<0.049	^3+	0.049		ug/L		08/25/23 09:10	08/26/23 18:28	1
Butylbenzylphthalate	<0.49		0.49		ug/L		08/25/23 09:10	08/26/23 18:28	1
Chlorobenzilate	<0.098	^3+ *+	0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Chloroneb	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Chlorothalonil (Draconil, Bravo)	<0.098	^3+	0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Chlorpyrifos	<0.049		0.049		ug/L		08/25/23 09:10	08/26/23 18:28	1
Chrysene	<0.020		0.020		ug/L		08/25/23 09:10	08/26/23 18:28	1
delta-BHC	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Di(2-ethylhexyl)adipate	<0.59		0.59		ug/L		08/25/23 09:10	08/26/23 18:28	1
Dibenz(a,h)anthracene	<0.049		0.049		ug/L		08/25/23 09:10	08/26/23 18:28	1
Diclorvos (DDVP)	<0.049		0.049		ug/L		08/25/23 09:10	08/26/23 18:28	1
Dieldrin	<0.20		0.20		ug/L		08/25/23 09:10	08/26/23 18:28	1
Diethylphthalate	<0.49		0.49		ug/L		08/25/23 09:10	08/26/23 18:28	1
Dimethylphthalate	<0.49		0.49		ug/L		08/25/23 09:10	08/26/23 18:28	1
Di-n-butyl phthalate	<0.98		0.98		ug/L		08/25/23 09:10	08/26/23 18:28	1
Di-n-octyl phthalate	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Endosulfan I (Alpha)	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Endosulfan II (Beta)	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Endosulfan sulfate	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Endrin	<0.098	*+	0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Endrin aldehyde	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
EPTC	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Fluoranthene	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Fluorene	<0.049		0.049		ug/L		08/25/23 09:10	08/26/23 18:28	1
gamma-Chlordane	<0.049		0.049		ug/L		08/25/23 09:10	08/26/23 18:28	1
Heptachlor	<0.039		0.039		ug/L		08/25/23 09:10	08/26/23 18:28	1
Heptachlor epoxide (isomer B)	<0.049		0.049		ug/L		08/25/23 09:10	08/26/23 18:28	1
Hexachlorobenzene	<0.049		0.049		ug/L		08/25/23 09:10	08/26/23 18:28	1
Hexachlorocyclopentadiene	<0.049		0.049		ug/L		08/25/23 09:10	08/26/23 18:28	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049		ug/L		08/25/23 09:10	08/26/23 18:28	1
Isophorone	<0.49		0.49		ug/L		08/25/23 09:10	08/26/23 18:28	1
Lindane	<0.039		0.039		ug/L		08/25/23 09:10	08/26/23 18:28	1
Malathion	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Methoxychlor	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Metolachlor	<0.049		0.049		ug/L		08/25/23 09:10	08/26/23 18:28	1
Molinate	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Naphthalene	<0.29		0.29		ug/L		08/25/23 09:10	08/26/23 18:28	1
Parathion	<0.098	^3+ *+	0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Pendimethalin (Penoxaline)	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Phenanthrene	<0.039		0.039		ug/L		08/25/23 09:10	08/26/23 18:28	1
Propachlor	<0.049		0.049		ug/L		08/25/23 09:10	08/26/23 18:28	1
Pyrene	<0.049		0.049		ug/L		08/25/23 09:10	08/26/23 18:28	1
Simazine	<0.049	*+	0.049		ug/L		08/25/23 09:10	08/26/23 18:28	1
Terbacil	<0.098	^3+ *+	0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1
Terbuthylazine	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1

Client Sample ID: AIEA GULCH WELLS PUMP 2
Date Collected: 08/21/23 10:39
Date Received: 08/23/23 10:25

Lab Sample ID: 380-60202-2
Matrix: Drinking Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Thiobencarb	<0.20		0.20		ug/L		08/25/23 09:10	08/26/23 18:28	1
Total Permethrin (mixed isomers)	<0.20		0.20		ug/L		08/25/23 09:10	08/26/23 18:28	1
trans-Nonachlor	<0.049		0.049		ug/L		08/25/23 09:10	08/26/23 18:28	1
Trifluralin	<0.098		0.098		ug/L		08/25/23 09:10	08/26/23 18:28	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*			*N/A*	*08/25/23 09:10*	*08/26/23 18:28*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*99*		*70 - 130*	*08/25/23 09:10*	*08/26/23 18:28*	*1*
Perylene-d12	*95*		*70 - 130*	*08/25/23 09:10*	*08/26/23 18:28*	*1*
Triphenylphosphate	*108*		*70 - 130*	*08/25/23 09:10*	*08/26/23 18:28*	*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		09/06/23 16:30	09/09/23 17:51	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 17:51	1

Client Sample ID: AIEA GULCH WELLS PUMP 2
Date Collected: 08/21/23 10:39
Date Received: 08/23/23 10:25

Lab Sample ID: 380-60202-2
Matrix: Drinking Water

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*84*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:51*	*1*
13C6 PFDA	*94*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:51*	*1*
13C5 PFHxA	*101*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:51*	*1*
13C4 PFHpA	*116*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:51*	*1*
13C8 PFOA	*99*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:51*	*1*
13C9 PFNA	*105*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:51*	*1*
13C7 PFUnA	*94*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:51*	*1*
13C2 PFDoA	*98*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:51*	*1*
13C4 PFBA	*97*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:51*	*1*
13C5 PFPeA	*94*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:51*	*1*
13C3 PFBS	*97*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:51*	*1*
13C3 PFHxS	*99*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:51*	*1*
13C8 PFOS	*97*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:51*	*1*
13C2-4:2-FTS	*84*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:51*	*1*
13C2-6:2-FTS	*83*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:51*	*1*
13C2-8:2-FTS	*82*		*50 - 200*	*09/06/23 16:30*	*09/09/23 17:51*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		08/28/23 07:58	08/29/23 16:42	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		08/28/23 07:58	08/29/23 16:42	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		08/28/23 07:58	08/29/23 16:42	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		08/28/23 07:58	08/29/23 16:42	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		08/28/23 07:58	08/29/23 16:42	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		08/28/23 07:58	08/29/23 16:42	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		08/28/23 07:58	08/29/23 16:42	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		08/28/23 07:58	08/29/23 16:42	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		08/28/23 07:58	08/29/23 16:42	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		08/28/23 07:58	08/29/23 16:42	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		08/28/23 07:58	08/29/23 16:42	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		08/28/23 07:58	08/29/23 16:42	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		08/28/23 07:58	08/29/23 16:42	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		08/28/23 07:58	08/29/23 16:42	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		08/28/23 07:58	08/29/23 16:42	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		08/28/23 07:58	08/29/23 16:42	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		08/28/23 07:58	08/29/23 16:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		08/28/23 07:58	08/29/23 16:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*107*		*70 - 130*	*08/28/23 07:58*	*08/29/23 16:42*	*1*
13C2 PFHxA	*113*		*70 - 130*	*08/28/23 07:58*	*08/29/23 16:42*	*1*
13C2 PFDA	*117*		*70 - 130*	*08/28/23 07:58*	*08/29/23 16:42*	*1*
13C3-GenX	*113*		*70 - 130*	*08/28/23 07:58*	*08/29/23 16:42*	*1*

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

Job ID: 380-60202-1

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260) P2
Date Collected: 08/21/23 11:14
Date Received: 08/23/23 10:25

Lab Sample ID: 380-60202-5
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:00	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*78*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:00*	*1*
13C6 PFDA	*95*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:00*	*1*
13C5 PFHxA	*98*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:00*	*1*
13C4 PFHpA	*114*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:00*	*1*
13C8 PFOA	*100*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:00*	*1*
13C9 PFNA	*102*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:00*	*1*
13C7 PFUnA	*95*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:00*	*1*
13C2 PFDoA	*95*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:00*	*1*
13C4 PFBA	*100*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:00*	*1*
13C5 PFPeA	*97*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:00*	*1*
13C3 PFBS	*98*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:00*	*1*
13C3 PFHxS	*98*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:00*	*1*
13C8 PFOS	*98*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:00*	*1*

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

Lab Sample ID: 380-60202-5

Date Collected: 08/21/23 11:14

Matrix: Water

Date Received: 08/23/23 10:25

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

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2-4:2-FTS	*86*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:00*	*1*
13C2-6:2-FTS	*82*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:00*	*1*
13C2-8:2-FTS	*76*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:00*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:01	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:01	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:01	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:01	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:01	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:01	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:01	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:01	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:01	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:01	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:01	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:01	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:01	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:01	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:01	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:01	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:01	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*107*		*70 - 130*	*08/28/23 07:58*	*08/29/23 17:01*	*1*
13C2 PFHxA	*104*		*70 - 130*	*08/28/23 07:58*	*08/29/23 17:01*	*1*
13C2 PFDA	*110*		*70 - 130*	*08/28/23 07:58*	*08/29/23 17:01*	*1*
13C3-GenX	*99*		*70 - 130*	*08/28/23 07:58*	*08/29/23 17:01*	*1*

Client Sample ID: FB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-60202-6

Date Collected: 08/21/23 10:39

Matrix: Water

Date Received: 08/23/23 10:25

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		09/06/23 16:30	09/09/23 18:10	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1

Client Sample ID: FB AIEA GULCH WELLS PUMP 2
Date Collected: 08/21/23 10:39
Date Received: 08/23/23 10:25

Lab Sample ID: 380-60202-6
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		09/06/23 16:30	09/09/23 18:10	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*85*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:10*	*1*
13C6 PFDA	*94*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:10*	*1*
13C5 PFHxA	*100*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:10*	*1*
13C4 PFHpA	*115*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:10*	*1*
13C8 PFOA	*100*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:10*	*1*
13C9 PFNA	*101*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:10*	*1*
13C7 PFUnA	*92*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:10*	*1*
13C2 PFDoA	*94*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:10*	*1*
13C4 PFBA	*102*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:10*	*1*
13C5 PFPeA	*98*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:10*	*1*
13C3 PFBS	*96*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:10*	*1*
13C3 PFHxS	*97*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:10*	*1*
13C8 PFOS	*96*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:10*	*1*
13C2-4:2-FTS	*90*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:10*	*1*
13C2-6:2-FTS	*84*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:10*	*1*
13C2-8:2-FTS	*77*		*50 - 200*	*09/06/23 16:30*	*09/09/23 18:10*	*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		08/28/23 07:58	08/29/23 17:10	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:10	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:10	1

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

Job ID: 380-60202-1

Client Sample ID: FB AIEA GULCH WELLS PUMP 2
Date Collected: 08/21/23 10:39
Date Received: 08/23/23 10:25

Lab Sample ID: 380-60202-6
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:10	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:10	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:10	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:10	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:10	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:10	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:10	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:10	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:10	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:10	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:10	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:10	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:10	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:10	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		08/28/23 07:58	08/29/23 17:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*103*		*70 - 130*	*08/28/23 07:58*	*08/29/23 17:10*	*1*
13C2 PFHxA	*120*		*70 - 130*	*08/28/23 07:58*	*08/29/23 17:10*	*1*
13C2 PFDA	*124*		*70 - 130*	*08/28/23 07:58*	*08/29/23 17:10*	*1*
13C3-GenX	*105*		*70 - 130*	*08/28/23 07:58*	*08/29/23 17:10*	*1*

Action Limit Summary

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

Job ID: 380-60202-1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2 — Lab Sample ID: 380-60202-1

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	<0.020		ug/L	0.2	0.020	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.59		ug/L	6	0.59	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.59		ug/L	400	0.59	525.2	Total/NA
Endrin	<0.098	*+	ug/L	2	0.098	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	<0.098		ug/L	40	0.098	525.2	Total/NA
Simazine	<0.049	*+	ug/L	4	0.049	525.2	Total/NA

Client Sample ID: AIEA GULCH WELLS PUMP 2 — Lab Sample ID: 380-60202-2

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	<0.020		ug/L	0.2	0.020	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.59		ug/L	6	0.59	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.59		ug/L	400	0.59	525.2	Total/NA
Endrin	<0.098	*+	ug/L	2	0.098	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	<0.098		ug/L	40	0.098	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: 380-60202-1

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)
380-60202-1	AIEA WELLS PUMPS 1&2 (260)	98	96	105
380-60202-2	AIEA GULCH WELLS PUMP 2	99	95	108

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)
380-60067-B-1-A MS	Matrix Spike	100	95	98
380-60069-B-2-A DU	Duplicate	100	99	106
LCS 380-53151/23-A	Lab Control Sample	99	97	101
LCSD 380-53151/24-A	Lab Control Sample Dup	98	97	106
MB 380-53151/21-A	Method Blank	100	95	104
MRL 380-53151/22-A	Lab Control Sample	96	94	103

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)
380-60202-1	AIEA WELLS PUMPS 1&2 (260)	108	107	112	113
380-60202-2	AIEA GULCH WELLS PUMP 2	107	113	117	113

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)
380-60167-V-1-A MS	Matrix Spike	92	103	106	129
380-60167-W-1-A MSD	Matrix Spike Duplicate	90	106	108	128
380-60202-5	FB AIEA WELLS PUMPS 1&2 (260) P2	107	104	110	99
380-60202-6	FB AIEA GULCH WELLS PUMP 2	103	120	124	105

Surrogate Summary

Client: City & County of Honolulu
Job ID: 380-60202-1
Project/Site: RED-HILL

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)
LCS 380-53457/25-A	Lab Control Sample	95	108	113	103
LCSD 380-53457/26-A	Lab Control Sample Dup	111	123	124	125
MBL 380-53457/23-A	Method Blank	108	111	110	101
MRL 380-53457/24-A	Lab Control Sample	105	117	122	117

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: 380-60202-1

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)
380-60202-1	AIEA WELLS PUMPS 1&2 (260)	87	96	102	118	102	103	97	96
380-60202-2	AIEA GULCH WELLS PUMP 2	84	94	101	116	99	105	94	98

		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)
380-60202-1	AIEA WELLS PUMPS 1&2 (260)	95	91	102	103	98	90	80	77
380-60202-2	AIEA GULCH WELLS PUMP 2	97	94	97	99	97	84	83	82

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)
380-60043-C-3-B LMS	Matrix Spike	96	90	90	104	91	92	85	88
380-60043-D-3-B LMSD	Matrix Spike Duplicate	104	93	91	108	96	97	86	93
380-60202-5	FB AIEA WELLS PUMPS 1&2 (260) P2	78	95	98	114	100	102	95	95
380-60202-6	FB AIEA GULCH WELLS PUMP 2	85	94	100	115	100	101	92	94
LCS 380-54303/20-A	Lab Control Sample	95	89	100	110	99	97	85	89
LCSD 380-54303/21-A	Lab Control Sample Dup	105	93	102	116	102	103	95	94
MBL 380-54303/18-A	Method Blank	100	85	102	114	97	96	78	79
MRL 380-54303/19-A	Lab Control Sample	104	89	104	116	100	101	86	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)
380-60043-C-3-B LMS	Matrix Spike	92	179	98	105	97	110	85	90
380-60043-D-3-B LMSD	Matrix Spike Duplicate	96	184	98	105	97	112	89	85
380-60202-5	FB AIEA WELLS PUMPS 1&2 (260) P2	100	97	98	98	98	86	82	76
380-60202-6	FB AIEA GULCH WELLS PUMP 2	102	98	96	97	96	90	84	77

Isotope Dilution Summary

Client: City & County of Honolulu
Job ID: 380-60202-1
Project/Site: RED-HILL

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

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
LCS 380-54303/20-A	Lab Control Sample	96	90	102	100	92	78	73	68
LCSD 380-54303/21-A	Lab Control Sample Dup	97	95	101	98	97	77	78	75
MBL 380-54303/18-A	Method Blank	96	86	105	111	91	82	77	65
MRL 380-54303/19-A	Lab Control Sample	97	95	108	106	95	82	79	71

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 380-53151/21-A
Matrix: Water
Analysis Batch: 53371

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53151

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
2,4'-DDD	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
2,4'-DDE	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
2,4'-DDT	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
2,4-Dinitrotoluene	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
2,6-Dinitrotoluene	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
2-Methylnaphthalene	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
4,4'-DDD	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
4,4'-DDE	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
4,4'-DDT	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Acenaphthene	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Acenaphthylene	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Acetochlor	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Alachlor	<0.050		0.050		ug/L		08/25/23 07:45	08/26/23 15:07	1
alpha-BHC	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
alpha-Chlordane	<0.050		0.050		ug/L		08/25/23 07:45	08/26/23 15:07	1
Anthracene	<0.020		0.020		ug/L		08/25/23 07:45	08/26/23 15:07	1
Atrazine	<0.050		0.050		ug/L		08/25/23 07:45	08/26/23 15:07	1
Benz(a)anthracene	<0.050		0.050		ug/L		08/25/23 07:45	08/26/23 15:07	1
Benzo[a]pyrene	<0.020		0.020		ug/L		08/25/23 07:45	08/26/23 15:07	1
Benzo[b]fluoranthene	<0.020		0.020		ug/L		08/25/23 07:45	08/26/23 15:07	1
Benzo[g,h,i]perylene	<0.050		0.050		ug/L		08/25/23 07:45	08/26/23 15:07	1
Benzo[k]fluoranthene	<0.020		0.020		ug/L		08/25/23 07:45	08/26/23 15:07	1
beta-BHC	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Bis(2-ethylhexyl) phthalate	<0.60		0.60		ug/L		08/25/23 07:45	08/26/23 15:07	1
Bromacil	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Butachlor	<0.050		0.050		ug/L		08/25/23 07:45	08/26/23 15:07	1
Butylbenzylphthalate	<0.50		0.50		ug/L		08/25/23 07:45	08/26/23 15:07	1
Chlorobenzilate	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Chloroneb	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Chlorpyrifos	<0.050		0.050		ug/L		08/25/23 07:45	08/26/23 15:07	1
Chrysene	<0.020		0.020		ug/L		08/25/23 07:45	08/26/23 15:07	1
delta-BHC	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Di(2-ethylhexyl)adipate	<0.60		0.60		ug/L		08/25/23 07:45	08/26/23 15:07	1
Dibenz(a,h)anthracene	<0.050		0.050		ug/L		08/25/23 07:45	08/26/23 15:07	1
Diclorvos (DDVP)	<0.050		0.050		ug/L		08/25/23 07:45	08/26/23 15:07	1
Dieldrin	<0.20		0.20		ug/L		08/25/23 07:45	08/26/23 15:07	1
Diethylphthalate	<0.50		0.50		ug/L		08/25/23 07:45	08/26/23 15:07	1
Dimethylphthalate	<0.50		0.50		ug/L		08/25/23 07:45	08/26/23 15:07	1
Di-n-butyl phthalate	<0.99		0.99		ug/L		08/25/23 07:45	08/26/23 15:07	1
Di-n-octyl phthalate	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Endosulfan I (Alpha)	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Endosulfan II (Beta)	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Endosulfan sulfate	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Endrin	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Endrin aldehyde	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
EPTC	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1

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

Lab Sample ID: MB 380-53151/21-A
Matrix: Water
Analysis Batch: 53371

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53151

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Fluorene	<0.050		0.050		ug/L		08/25/23 07:45	08/26/23 15:07	1
gamma-Chlordane	<0.050		0.050		ug/L		08/25/23 07:45	08/26/23 15:07	1
Heptachlor	<0.040		0.040		ug/L		08/25/23 07:45	08/26/23 15:07	1
Heptachlor epoxide (isomer B)	<0.050		0.050		ug/L		08/25/23 07:45	08/26/23 15:07	1
Hexachlorobenzene	<0.050		0.050		ug/L		08/25/23 07:45	08/26/23 15:07	1
Hexachlorocyclopentadiene	<0.050		0.050		ug/L		08/25/23 07:45	08/26/23 15:07	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050		ug/L		08/25/23 07:45	08/26/23 15:07	1
Isophorone	<0.50		0.50		ug/L		08/25/23 07:45	08/26/23 15:07	1
Lindane	<0.040		0.040		ug/L		08/25/23 07:45	08/26/23 15:07	1
Malathion	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Methoxychlor	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Metolachlor	<0.050		0.050		ug/L		08/25/23 07:45	08/26/23 15:07	1
Molinate	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Naphthalene	<0.30		0.30		ug/L		08/25/23 07:45	08/26/23 15:07	1
Parathion	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Pendimethalin (Penoxaline)	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Phenanthrene	<0.040		0.040		ug/L		08/25/23 07:45	08/26/23 15:07	1
Propachlor	<0.050		0.050		ug/L		08/25/23 07:45	08/26/23 15:07	1
Pyrene	<0.050		0.050		ug/L		08/25/23 07:45	08/26/23 15:07	1
Simazine	<0.050		0.050		ug/L		08/25/23 07:45	08/26/23 15:07	1
Terbacil	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Terbuthylazine	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1
Thiobencarb	<0.20		0.20		ug/L		08/25/23 07:45	08/26/23 15:07	1
Total Permethrin (mixed isomers)	<0.20		0.20		ug/L		08/25/23 07:45	08/26/23 15:07	1
trans-Nonachlor	<0.050		0.050		ug/L		08/25/23 07:45	08/26/23 15:07	1
Trifluralin	<0.099		0.099		ug/L		08/25/23 07:45	08/26/23 15:07	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1H-Imidazole, 4,5-dihydro-2-methyl-	*0.847*	*T J N*	*ug/L*		*2.30*	*534-26-9*	*08/25/23 07:45*	*08/26/23 15:07*	*1*
Sulfurous acid, cyclohexylmethyl octadecyl ester	*0.888*	*T J N*	*ug/L*		*2.38*	*1000309-22-6*	*08/25/23 07:45*	*08/26/23 15:07*	*1*
Decane	*2.38*	*T J N*	*ug/L*		*2.49*	*124-18-5*	*08/25/23 07:45*	*08/26/23 15:07*	*1*
Tetradecanoic acid	*0.515*	*T J N*	*ug/L*		*5.92*	*544-63-8*	*08/25/23 07:45*	*08/26/23 15:07*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*100*		*70 - 130*	*08/25/23 07:45*	*08/26/23 15:07*	*1*
Perylene-d12	*95*		*70 - 130*	*08/25/23 07:45*	*08/26/23 15:07*	*1*
Triphenylphosphate	*104*		*70 - 130*	*08/25/23 07:45*	*08/26/23 15:07*	*1*

Lab Sample ID: LCS 380-53151/23-A
Matrix: Water
Analysis Batch: 53371

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53151

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	1.99	2.11		ug/L		106	70 - 130
2,4'-DDD	1.99	2.15		ug/L		108	70 - 130
2,4'-DDE	1.99	2.15		ug/L		108	70 - 130

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

Lab Sample ID: LCS 380-53151/23-A
Matrix: Water
Analysis Batch: 53371

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53151

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDT	1.99	2.39		ug/L		120	70 - 130
2,4-Dinitrotoluene	1.99	2.59		ug/L		130	70 - 130
2,6-Dinitrotoluene	1.99	2.40		ug/L		121	70 - 130
2-Methylnaphthalene	1.99	2.15		ug/L		108	70 - 130
4,4'-DDD	1.99	2.23		ug/L		112	70 - 130
4,4'-DDE	1.99	2.04		ug/L		103	70 - 130
4,4'-DDT	1.99	2.22		ug/L		112	70 - 130
Acenaphthene	1.99	2.11		ug/L		106	70 - 130
Acenaphthylene	1.99	2.15		ug/L		108	70 - 130
Acetochlor	1.99	2.50		ug/L		126	70 - 130
Alachlor	1.99	2.43		ug/L		122	70 - 130
alpha-BHC	1.99	2.17		ug/L		109	70 - 130
alpha-Chlordane	1.99	1.91		ug/L		96	70 - 130
Anthracene	1.99	2.15		ug/L		108	70 - 130
Atrazine	1.99	2.55		ug/L		129	70 - 130
Benz(a)anthracene	1.99	2.12		ug/L		106	70 - 130
Benzo[a]pyrene	1.99	2.20		ug/L		111	70 - 130
Benzo[b]fluoranthene	1.99	2.25		ug/L		113	70 - 130
Benzo[g,h,i]perylene	1.99	2.04		ug/L		102	70 - 130
Benzo[k]fluoranthene	1.99	2.24		ug/L		113	70 - 130
beta-BHC	1.99	2.26		ug/L		114	70 - 130
Bis(2-ethylhexyl) phthalate	1.99	2.28		ug/L		115	70 - 130
Bromacil	1.99	2.41		ug/L		121	70 - 130
Butachlor	1.99	2.37		ug/L		119	70 - 130
Butylbenzylphthalate	1.99	2.27		ug/L		114	70 - 130
Chlorobenzilate	1.99	2.50		ug/L		126	70 - 130
Chloroneb	1.99	2.14		ug/L		108	70 - 130
Chlorothalonil (Draconil, Bravo)	1.99	2.15		ug/L		108	70 - 130
Chlorpyrifos	1.99	2.34		ug/L		118	70 - 130
Chrysene	1.99	2.09		ug/L		105	70 - 130
delta-BHC	1.99	2.18		ug/L		110	70 - 130
Di(2-ethylhexyl)adipate	1.99	2.30		ug/L		116	70 - 130
Dibenz(a,h)anthracene	1.99	2.12		ug/L		107	70 - 130
Diclorvos (DDVP)	1.99	2.44		ug/L		123	70 - 130
Dieldrin	1.99	2.20		ug/L		111	70 - 130
Diethylphthalate	1.99	2.24		ug/L		113	70 - 130
Dimethylphthalate	1.99	2.19		ug/L		110	70 - 130
Di-n-butyl phthalate	3.97	4.49		ug/L		113	70 - 130
Di-n-octyl phthalate	1.99	2.29		ug/L		115	70 - 130
Endosulfan I (Alpha)	1.99	1.98		ug/L		99	70 - 130
Endosulfan II (Beta)	1.99	2.20		ug/L		111	70 - 130
Endosulfan sulfate	1.99	2.31		ug/L		116	70 - 130
Endrin	1.99	2.68	*+	ug/L		135	70 - 130
Endrin aldehyde	1.99	2.13		ug/L		107	70 - 130
EPTC	1.99	2.29		ug/L		115	70 - 130
Fluoranthene	1.99	2.12		ug/L		107	70 - 130
Fluorene	1.99	2.25		ug/L		113	70 - 130
gamma-Chlordane	1.99	1.91		ug/L		96	70 - 130
Heptachlor	1.99	2.28		ug/L		115	70 - 130

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

Lab Sample ID: LCS 380-53151/23-A
Matrix: Water
Analysis Batch: 53371

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53151

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Heptachlor epoxide (isomer B)	1.99	1.98		ug/L		100	70 - 130
Hexachlorobenzene	1.99	1.99		ug/L		100	70 - 130
Hexachlorocyclopentadiene	1.99	1.96		ug/L		99	70 - 130
Indeno[1,2,3-cd]pyrene	1.99	2.09		ug/L		105	70 - 130
Isophorone	1.99	2.04		ug/L		103	70 - 130
Lindane	1.99	2.19		ug/L		110	70 - 130
Malathion	1.99	2.33		ug/L		117	70 - 130
Methoxychlor	1.99	2.35		ug/L		118	70 - 130
Metolachlor	1.99	2.39		ug/L		120	70 - 130
Molinate	1.99	2.39		ug/L		120	70 - 130
Naphthalene	1.99	2.10		ug/L		106	70 - 130
Parathion	1.99	2.82	*+	ug/L		142	70 - 130
Pendimethalin (Penoxaline)	1.99	2.39		ug/L		121	70 - 130
Phenanthrene	1.99	2.06		ug/L		104	70 - 130
Propachlor	1.99	2.51		ug/L		126	70 - 130
Pyrene	1.99	2.19		ug/L		110	70 - 130
Simazine	1.99	2.47		ug/L		124	70 - 130
Terbacil	1.99	2.68	*+	ug/L		135	70 - 130
Terbuthylazine	1.99	2.36		ug/L		119	70 - 130
Thiobencarb	1.99	2.36		ug/L		119	70 - 130
trans-Nonachlor	1.99	1.97		ug/L		99	70 - 130
Trifluralin	1.99	2.23		ug/L		112	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Nitro-m-xylene	*99*		*70 - 130*
Perylene-d12	*97*		*70 - 130*
Triphenylphosphate	*101*		*70 - 130*

Lab Sample ID: LCSD 380-53151/24-A
Matrix: Water
Analysis Batch: 53371

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53151

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	1.99	2.15		ug/L		108	70 - 130	2	20
2,4'-DDD	1.99	2.27		ug/L		114	70 - 130	6	20
2,4'-DDE	1.99	2.28		ug/L		114	70 - 130	6	20
2,4'-DDT	1.99	2.55		ug/L		128	70 - 130	6	20
2,4-Dinitrotoluene	1.99	2.69	*+	ug/L		135	70 - 130	4	20
2,6-Dinitrotoluene	1.99	2.51		ug/L		126	70 - 130	5	20
2-Methylnaphthalene	1.99	2.20		ug/L		110	70 - 130	2	20
4,4'-DDD	1.99	2.38		ug/L		120	70 - 130	7	20
4,4'-DDE	1.99	2.21		ug/L		111	70 - 130	8	20
4,4'-DDT	1.99	2.35		ug/L		118	70 - 130	6	20
Acenaphthene	1.99	2.15		ug/L		108	70 - 130	2	20
Acenaphthylene	1.99	2.21		ug/L		111	70 - 130	3	20
Acetochlor	1.99	2.56		ug/L		129	70 - 130	2	20
Alachlor	1.99	2.50		ug/L		126	70 - 130	3	20
alpha-BHC	1.99	2.22		ug/L		112	70 - 130	2	20

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

Lab Sample ID: LCSD 380-53151/24-A
Matrix: Water
Analysis Batch: 53371

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53151

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
alpha-Chlordane			1.99	2.02		ug/L		101	70 - 130	6	20
Anthracene			1.99	2.21		ug/L		111	70 - 130	3	20
Atrazine			1.99	2.63	*+	ug/L		132	70 - 130	3	20
Benz(a)anthracene			1.99	2.25		ug/L		113	70 - 130	6	20
Benzo[a]pyrene			1.99	2.27		ug/L		114	70 - 130	3	20
Benzo[b]fluoranthene			1.99	2.27		ug/L		114	70 - 130	1	20
Benzo[g,h,i]perylene			1.99	2.15		ug/L		108	70 - 130	6	20
Benzo[k]fluoranthene			1.99	2.35		ug/L		118	70 - 130	5	20
beta-BHC			1.99	2.35		ug/L		118	70 - 130	4	20
Bis(2-ethylhexyl) phthalate			1.99	2.30		ug/L		116	70 - 130	1	20
Bromacil			1.99	2.54		ug/L		128	70 - 130	5	20
Butachlor			1.99	2.42		ug/L		122	70 - 130	2	20
Butylbenzylphthalate			1.99	2.39		ug/L		120	70 - 130	5	20
Chlorobenzilate			1.99	2.61	*+	ug/L		131	70 - 130	4	20
Chloroneb			1.99	2.17		ug/L		109	70 - 130	1	20
Chlorothalonil (Draconil, Bravo)			1.99	2.26		ug/L		114	70 - 130	5	20
Chlorpyrifos			1.99	2.41		ug/L		121	70 - 130	3	20
Chrysene			1.99	2.16		ug/L		109	70 - 130	4	20
delta-BHC			1.99	2.23		ug/L		112	70 - 130	2	20
Di(2-ethylhexyl)adipate			1.99	2.41		ug/L		121	70 - 130	5	20
Dibenz(a,h)anthracene			1.99	2.17		ug/L		109	70 - 130	2	20
Diclorvos (DDVP)			1.99	2.48		ug/L		124	70 - 130	1	20
Dieldrin			1.99	2.29		ug/L		115	70 - 130	4	20
Diethylphthalate			1.99	2.27		ug/L		114	70 - 130	1	20
Dimethylphthalate			1.99	2.27		ug/L		114	70 - 130	4	20
Di-n-butyl phthalate			3.98	4.60		ug/L		116	70 - 130	2	20
Di-n-octyl phthalate			1.99	2.25		ug/L		113	70 - 130	2	20
Endosulfan I (Alpha)			1.99	2.04		ug/L		103	70 - 130	3	20
Endosulfan II (Beta)			1.99	2.35		ug/L		118	70 - 130	7	20
Endosulfan sulfate			1.99	2.44		ug/L		123	70 - 130	6	20
Endrin			1.99	2.85	*+	ug/L		143	70 - 130	6	20
Endrin aldehyde			1.99	2.15		ug/L		108	70 - 130	1	20
EPTC			1.99	2.32		ug/L		117	70 - 130	1	20
Fluoranthene			1.99	2.23		ug/L		112	70 - 130	5	20
Fluorene			1.99	2.31		ug/L		116	70 - 130	3	20
gamma-Chlordane			1.99	2.02		ug/L		101	70 - 130	6	20
Heptachlor			1.99	2.37		ug/L		119	70 - 130	4	20
Heptachlor epoxide (isomer B)			1.99	2.06		ug/L		103	70 - 130	4	20
Hexachlorobenzene			1.99	2.16		ug/L		109	70 - 130	8	20
Hexachlorocyclopentadiene			1.99	2.11		ug/L		106	70 - 130	7	20
Indeno[1,2,3-cd]pyrene			1.99	2.21		ug/L		111	70 - 130	5	20
Isophorone			1.99	2.09		ug/L		105	70 - 130	2	20
Lindane			1.99	2.28		ug/L		114	70 - 130	4	20
Malathion			1.99	2.42		ug/L		122	70 - 130	4	20
Methoxychlor			1.99	2.46		ug/L		123	70 - 130	4	20
Metolachlor			1.99	2.44		ug/L		123	70 - 130	2	20
Molinate			1.99	2.42		ug/L		122	70 - 130	1	20
Naphthalene			1.99	2.12		ug/L		106	70 - 130	1	20
Parathion			1.99	2.90	*+	ug/L		146	70 - 130	3	20

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

Lab Sample ID: LCSD 380-53151/24-A
Matrix: Water
Analysis Batch: 53371

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53151

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Pendimethalin (Penoxaline)			1.99	2.54		ug/L		128	70 - 130	6	20
Phenanthrene			1.99	2.15		ug/L		108	70 - 130	4	20
Propachlor			1.99	2.56		ug/L		129	70 - 130	2	20
Pyrene			1.99	2.30		ug/L		116	70 - 130	5	20
Simazine			1.99	2.60	*+	ug/L		131	70 - 130	5	20
Terbacil			1.99	2.79	*+	ug/L		140	70 - 130	4	20
Terbuthylazine			1.99	2.48		ug/L		125	70 - 130	5	20
Thiobencarb			1.99	2.44		ug/L		122	70 - 130	3	20
trans-Nonachlor			1.99	2.07		ug/L		104	70 - 130	5	20
Trifluralin			1.99	2.36		ug/L		119	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Nitro-m-xylene	*98*		*70 - 130*
Perylene-d12	*97*		*70 - 130*
Triphenylphosphate	*106*		*70 - 130*

Lab Sample ID: MRL 380-53151/22-A
Matrix: Water
Analysis Batch: 53371

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53151

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
1-Methylnaphthalene			0.0995	0.117		ug/L		117	50 - 150		
2,4'-DDD			0.0995	0.141		ug/L		142	50 - 150		
2,4'-DDE			0.0995	0.102		ug/L		103	50 - 150		
2,4'-DDT			0.0995	0.104		ug/L		104	50 - 150		
2,4-Dinitrotoluene			0.0995	0.153	^3+	ug/L		154	50 - 150		
2,6-Dinitrotoluene			0.0995	0.126		ug/L		127	50 - 150		
2-Methylnaphthalene			0.0995	0.116		ug/L		116	50 - 150		
4,4'-DDD			0.0995	0.104		ug/L		105	50 - 150		
4,4'-DDE			0.0995	0.0982	J	ug/L		99	50 - 150		
4,4'-DDT			0.0995	0.131		ug/L		131	50 - 150		
Acenaphthene			0.0995	0.108		ug/L		108	50 - 150		
Acenaphthylene			0.0995	0.105		ug/L		105	50 - 150		
Acetochlor			0.0498	0.0533	J	ug/L		107	50 - 150		
Alachlor			0.0498	0.0647		ug/L		130	50 - 150		
alpha-BHC			0.0995	0.110		ug/L		111	50 - 150		
alpha-Chlordane			0.0249	<0.029		ug/L		91	50 - 150		
Anthracene			0.0199	0.0223		ug/L		112	50 - 150		
Atrazine			0.0498	0.0623		ug/L		125	50 - 150		
Benz(a)anthracene			0.0498	0.0481	J	ug/L		97	50 - 150		
Benzo[a]pyrene			0.0199	0.0173	J	ug/L		87	50 - 150		
Benzo[b]fluoranthene			0.0199	0.0193	J	ug/L		97	50 - 150		
Benzo[g,h,i]perylene			0.0498	0.0382	J	ug/L		77	50 - 150		
Benzo[k]fluoranthene			0.0199	0.0200		ug/L		101	50 - 150		
beta-BHC			0.0995	0.111		ug/L		112	50 - 150		
Bis(2-ethylhexyl) phthalate			0.597	0.863		ug/L		144	50 - 150		
Bromacil			0.0995	0.158	^3+	ug/L		159	50 - 150		
Butachlor			0.0498	0.0849	^3+	ug/L		171	50 - 150		

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

Lab Sample ID: MRL 380-53151/22-A
Matrix: Water
Analysis Batch: 53371

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53151

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Butylbenzylphthalate	0.149	0.196	J	ug/L		131	50 - 150
Chlorobenzilate	0.0995	0.160	^3+	ug/L		161	50 - 150
Chloroneb	0.0995	0.106		ug/L		106	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0995	0.161	^3+	ug/L		161	50 - 150
Chlorpyrifos	0.0498	0.0592		ug/L		119	50 - 150
Chrysene	0.0199	0.0215		ug/L		108	50 - 150
delta-BHC	0.0995	0.117		ug/L		117	50 - 150
Di(2-ethylhexyl)adipate	0.299	0.392	J	ug/L		131	50 - 150
Dibenz(a,h)anthracene	0.0498	0.0388	J	ug/L		78	50 - 150
Diclorvos (DDVP)	0.0498	0.0625		ug/L		126	50 - 150
Dieldrin	0.0995	0.112	J	ug/L		113	50 - 150
Diethylphthalate	0.149	0.195	J	ug/L		130	50 - 150
Dimethylphthalate	0.299	0.315	J	ug/L		106	50 - 150
Di-n-butyl phthalate	0.299	0.453	J	ug/L		152	49 - 243
Di-n-octyl phthalate	0.0995	0.136		ug/L		137	50 - 150
Endosulfan I (Alpha)	0.0995	0.106		ug/L		106	50 - 150
Endosulfan II (Beta)	0.0995	0.130		ug/L		131	50 - 150
Endosulfan sulfate	0.0995	0.111		ug/L		111	50 - 150
Endrin	0.0995	0.117		ug/L		117	50 - 150
Endrin aldehyde	0.0995	0.0919	J	ug/L		92	50 - 150
EPTC	0.0995	0.114		ug/L		115	50 - 150
Fluoranthene	0.0498	0.0562	J	ug/L		113	50 - 150
Fluorene	0.0498	0.0567		ug/L		114	50 - 150
gamma-Chlordane	0.0249	0.0273	J	ug/L		110	50 - 150
Heptachlor	0.0398	0.0598		ug/L		150	50 - 150
Heptachlor epoxide (isomer B)	0.0498	0.0495	J	ug/L		100	50 - 150
Hexachlorobenzene	0.0498	0.0488	J	ug/L		98	50 - 150
Hexachlorocyclopentadiene	0.0498	0.0419	J	ug/L		84	50 - 150
Indeno[1,2,3-cd]pyrene	0.0498	0.0394	J	ug/L		79	50 - 150
Isophorone	0.0995	0.111	J	ug/L		112	50 - 150
Lindane	0.0398	0.0466		ug/L		117	50 - 150
Malathion	0.0995	0.143		ug/L		144	50 - 150
Methoxychlor	0.0995	0.129		ug/L		129	50 - 150
Metolachlor	0.0498	0.0644		ug/L		129	50 - 150
Molinate	0.0995	0.118		ug/L		119	50 - 150
Naphthalene	0.0995	0.116	J	ug/L		116	50 - 150
Parathion	0.0995	0.165	^3+	ug/L		166	50 - 150
Pendimethalin (Penoxaline)	0.0995	0.137		ug/L		137	50 - 150
Phenanthrene	0.0199	0.0251	J	ug/L		126	50 - 150
Propachlor	0.0498	0.0605		ug/L		122	50 - 150
Pyrene	0.0498	0.0568		ug/L		114	50 - 150
Simazine	0.0498	0.0614		ug/L		123	50 - 150
Terbacil	0.0995	0.157	^3+	ug/L		157	50 - 150
Terbuthylazine	0.0995	0.117		ug/L		117	50 - 150
Thiobencarb	0.0995	0.133	J	ug/L		133	50 - 150
trans-Nonachlor	0.0249	<0.026		ug/L		96	50 - 150
Trifluralin	0.0995	0.120		ug/L		121	50 - 150

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

Lab Sample ID: MRL 380-53151/22-A
Matrix: Water
Analysis Batch: 53371

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53151

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	96		70 - 130
Perylene-d12	94		70 - 130
Triphenylphosphate	103		70 - 130

Lab Sample ID: 380-60067-B-1-A MS
Matrix: Water
Analysis Batch: 53371

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53151

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.097		1.94	2.06		ug/L		106	70 - 130
2,4'-DDD	<0.097		1.94	2.15		ug/L		111	70 - 130
2,4'-DDE	<0.097		1.94	2.06		ug/L		107	70 - 130
2,4'-DDT	<0.097		1.94	2.28		ug/L		118	70 - 130
2,4-Dinitrotoluene	<0.097	^3+ *+ F1	1.94	2.69	F1	ug/L		139	70 - 130
2,6-Dinitrotoluene	<0.097		1.94	2.50		ug/L		129	70 - 130
2-Methylnaphthalene	<0.097		1.94	2.14		ug/L		111	70 - 130
4,4'-DDD	<0.097		1.94	2.18		ug/L		113	70 - 130
4,4'-DDE	<0.097		1.94	1.99		ug/L		103	70 - 130
4,4'-DDT	<0.097		1.94	2.12		ug/L		110	70 - 130
Acenaphthene	<0.097		1.94	2.06		ug/L		107	70 - 130
Acenaphthylene	<0.097		1.94	2.13		ug/L		110	70 - 130
Acetochlor	<0.097		1.94	2.41		ug/L		124	70 - 130
Alachlor	<0.049		1.94	2.34		ug/L		121	70 - 130
alpha-BHC	<0.097		1.94	2.11		ug/L		109	70 - 130
alpha-Chlordane	<0.049		1.94	1.82		ug/L		94	70 - 130
Anthracene	<0.019		1.94	2.14		ug/L		111	70 - 130
Atrazine	<0.049	*+	1.94	2.27		ug/L		117	70 - 130
Benz(a)anthracene	<0.049		1.94	1.92		ug/L		99	70 - 130
Benzo[a]pyrene	<0.019		1.94	2.10		ug/L		108	70 - 130
Benzo[b]fluoranthene	<0.019		1.94	2.08		ug/L		108	70 - 130
Benzo[g,h,i]perylene	<0.049		1.94	1.94		ug/L		100	70 - 130
Benzo[k]fluoranthene	<0.019		1.94	2.15		ug/L		111	70 - 130
beta-BHC	<0.097		1.94	2.10		ug/L		109	70 - 130
Bis(2-ethylhexyl) phthalate	<0.58		1.94	2.17		ug/L		103	70 - 130
Bromacil	<0.097	^3+	1.94	2.36		ug/L		122	70 - 130
Butachlor	<0.049	^3+	1.94	2.31		ug/L		119	70 - 130
Butylbenzylphthalate	<0.49		1.94	2.17		ug/L		112	70 - 130
Chlorobenzilate	<0.097	^3+ *+	1.94	2.47		ug/L		128	70 - 130
Chloroneb	<0.097		1.94	2.09		ug/L		108	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.097	^3+	1.94	2.13		ug/L		110	70 - 130
Chlorpyrifos	<0.049		1.94	2.29		ug/L		118	70 - 130
Chrysene	<0.019		1.94	2.07		ug/L		107	70 - 130
delta-BHC	<0.097		1.94	2.05		ug/L		106	70 - 130
Di(2-ethylhexyl)adipate	<0.58		1.94	2.07		ug/L		107	70 - 130
Dibenz(a,h)anthracene	<0.049		1.94	1.99		ug/L		103	70 - 130
Diclorvos (DDVP)	<0.049		1.94	2.38		ug/L		123	70 - 130
Dieldrin	<0.19		1.94	2.18		ug/L		113	70 - 130
Diethylphthalate	<0.49		1.94	2.19		ug/L		113	70 - 130

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

Lab Sample ID: 380-60067-B-1-A MS
Matrix: Water
Analysis Batch: 53371

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53151

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Dimethylphthalate	<0.49		1.94	2.18		ug/L		113	70 - 130
Di-n-butyl phthalate	<0.97		3.87	4.37		ug/L		109	70 - 130
Di-n-octyl phthalate	<0.097		1.94	2.11		ug/L		109	70 - 130
Endosulfan I (Alpha)	<0.097		1.94	1.91		ug/L		99	70 - 130
Endosulfan II (Beta)	<0.097		1.94	2.18		ug/L		113	70 - 130
Endosulfan sulfate	<0.097		1.94	2.19		ug/L		113	70 - 130
Endrin	<0.097	*+	1.94	2.42		ug/L		125	70 - 130
Endrin aldehyde	<0.097	F1	1.94	1.29	F1	ug/L		67	70 - 130
EPTC	<0.097		1.94	2.29		ug/L		118	70 - 130
Fluoranthene	<0.097		1.94	2.06		ug/L		106	70 - 130
Fluorene	<0.049		1.94	2.19		ug/L		113	70 - 130
gamma-Chlordane	<0.049		1.94	1.91		ug/L		98	70 - 130
Heptachlor	<0.039		1.94	2.29		ug/L		118	70 - 130
Heptachlor epoxide (isomer B)	<0.049		1.94	1.96		ug/L		101	70 - 130
Hexachlorobenzene	<0.049		1.94	2.08		ug/L		107	70 - 130
Hexachlorocyclopentadiene	<0.049		1.94	2.21		ug/L		114	70 - 130
Indeno[1,2,3-cd]pyrene	<0.049		1.94	2.01		ug/L		104	70 - 130
Isophorone	<0.49		1.94	1.97		ug/L		102	70 - 130
Lindane	<0.039		1.94	2.14		ug/L		110	70 - 130
Malathion	<0.097		1.94	2.29		ug/L		118	70 - 130
Methoxychlor	<0.097		1.94	2.48		ug/L		128	70 - 130
Metolachlor	<0.049		1.94	2.37		ug/L		123	70 - 130
Molinate	<0.097		1.94	2.36		ug/L		122	70 - 130
Naphthalene	<0.29		1.94	1.99		ug/L		103	70 - 130
Parathion	<0.097	^3+ *+ F1	1.94	2.81	F1	ug/L		145	70 - 130
Pendimethalin (Penoxaline)	<0.097		1.94	2.52		ug/L		130	70 - 130
Phenanthrene	<0.039		1.94	2.09		ug/L		108	70 - 130
Propachlor	<0.049		1.94	2.47		ug/L		128	70 - 130
Pyrene	<0.049		1.94	2.11		ug/L		109	70 - 130
Simazine	<0.049	*+	1.94	2.14		ug/L		111	70 - 130
Terbacil	<0.097	^3+ *+	1.94	2.14		ug/L		111	70 - 130
Terbuthylazine	<0.097		1.94	2.11		ug/L		109	70 - 130
Thiobencarb	<0.19		1.94	2.30		ug/L		119	70 - 130
trans-Nonachlor	<0.049		1.94	1.90		ug/L		98	70 - 130
Trifluralin	<0.097		1.94	2.32		ug/L		120	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Nitro-m-xylene	*100*		*70 - 130*
Perylene-d12	*95*		*70 - 130*
Triphenylphosphate	*98*		*70 - 130*

Lab Sample ID: 380-60069-B-2-A DU
Matrix: Water
Analysis Batch: 53371

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 53151

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
1-Methylnaphthalene	<0.097		<0.097		ug/L		NC	20
2,4'-DDD	<0.097		<0.097		ug/L		NC	20

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

Lab Sample ID: 380-60069-B-2-A DU
Matrix: Water
Analysis Batch: 53371

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 53151

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
2,4'-DDE	<0.097		<0.097		ug/L		NC	20
2,4'-DDT	<0.097		<0.097		ug/L		NC	20
2,4-Dinitrotoluene	<0.097	^3+ *+	<0.097	*+	ug/L		NC	20
2,6-Dinitrotoluene	<0.097		<0.097		ug/L		NC	20
2-Methylnaphthalene	<0.097		<0.097		ug/L		NC	20
4,4'-DDD	<0.097		<0.097		ug/L		NC	20
4,4'-DDE	<0.097		<0.097		ug/L		NC	20
4,4'-DDT	<0.097		<0.097		ug/L		NC	20
Acenaphthene	<0.097		<0.097		ug/L		NC	20
Acenaphthylene	<0.097		<0.097		ug/L		NC	20
Acetochlor	<0.097		<0.097		ug/L		NC	20
Alachlor	<0.049		<0.048		ug/L		NC	20
alpha-BHC	<0.097		<0.097		ug/L		NC	20
alpha-Chlordane	<0.049		<0.048		ug/L		NC	20
Anthracene	<0.019		<0.019		ug/L		NC	20
Atrazine	<0.049	*+	<0.048	*+	ug/L		NC	20
Benz(a)anthracene	<0.049		<0.048		ug/L		NC	20
Benzo[a]pyrene	<0.019		<0.019		ug/L		NC	20
Benzo[b]fluoranthene	<0.019		<0.019		ug/L		NC	20
Benzo[g,h,i]perylene	<0.049		<0.048		ug/L		NC	20
Benzo[k]fluoranthene	<0.019		<0.019		ug/L		NC	20
beta-BHC	<0.097		<0.097		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	<0.58		<0.58		ug/L		NC	20
Bromacil	<0.097	^3+	<0.097		ug/L		NC	20
Butachlor	<0.049	^3+	<0.048		ug/L		NC	20
Butylbenzylphthalate	<0.49		<0.48		ug/L		NC	20
Chlorobenzilate	<0.097	^3+ *+	<0.097	*+	ug/L		NC	20
Chloroneb	<0.097		<0.097		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	<0.097	^3+	<0.097		ug/L		NC	20
Chlorpyrifos	<0.049		<0.048		ug/L		NC	20
Chrysene	<0.019		<0.019		ug/L		NC	20
delta-BHC	<0.097		<0.097		ug/L		NC	20
Di(2-ethylhexyl)adipate	<0.58		<0.58		ug/L		NC	20
Dibenz(a,h)anthracene	<0.049		<0.048		ug/L		NC	20
Diclorvos (DDVP)	<0.049		<0.048		ug/L		NC	20
Dieldrin	<0.19		<0.19		ug/L		NC	20
Diethylphthalate	<0.49		<0.48		ug/L		NC	20
Dimethylphthalate	<0.49		<0.48		ug/L		NC	20
Di-n-butyl phthalate	<0.97		<0.97		ug/L		NC	20
Di-n-octyl phthalate	<0.097		<0.097		ug/L		NC	20
Endosulfan I (Alpha)	<0.097		<0.097		ug/L		NC	20
Endosulfan II (Beta)	<0.097		<0.097		ug/L		NC	20
Endosulfan sulfate	<0.097		<0.097		ug/L		NC	20
Endrin	<0.097	*+	<0.097	*+	ug/L		NC	20
Endrin aldehyde	<0.097		<0.097		ug/L		NC	20
EPTC	<0.097		<0.097		ug/L		NC	20
Fluoranthene	<0.097		<0.097		ug/L		NC	20
Fluorene	<0.049		<0.048		ug/L		NC	20
gamma-Chlordane	<0.049		<0.048		ug/L		NC	20

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

Lab Sample ID: 380-60069-B-2-A DU
Matrix: Water
Analysis Batch: 53371

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 53151

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Heptachlor	<0.039			<0.039		ug/L				NC	20
Heptachlor epoxide (isomer B)	<0.049			<0.048		ug/L				NC	20
Hexachlorobenzene	<0.049			<0.048		ug/L				NC	20
Hexachlorocyclopentadiene	<0.049			<0.048		ug/L				NC	20
Indeno[1,2,3-cd]pyrene	<0.049			<0.048		ug/L				NC	20
Isophorone	<0.49			<0.48		ug/L				NC	20
Lindane	<0.039			<0.039		ug/L				NC	20
Malathion	<0.097			<0.097		ug/L				NC	20
Methoxychlor	<0.097			<0.097		ug/L				NC	20
Metolachlor	<0.049			<0.048		ug/L				NC	20
Molinate	<0.097			<0.097		ug/L				NC	20
Naphthalene	<0.29			<0.29		ug/L				NC	20
Parathion	<0.097	^3+ *+		<0.097	*+	ug/L				NC	20
Pendimethalin (Penoxaline)	<0.097			<0.097		ug/L				NC	20
Phenanthrene	<0.039			<0.039		ug/L				NC	20
Propachlor	<0.049			<0.048		ug/L				NC	20
Pyrene	<0.049			<0.048		ug/L				NC	20
Simazine	<0.049	*+		<0.048	*+	ug/L				NC	20
Terbacil	<0.097	^3+ *+		<0.097	*+	ug/L				NC	20
Terbuthylazine	<0.097			<0.097		ug/L				NC	20
Thiobencarb	<0.19			<0.19		ug/L				NC	20
Total Permethrin (mixed isomers)	<0.19			<0.19		ug/L				NC	20
trans-Nonachlor	<0.049			<0.048		ug/L				NC	20
Trifluralin	<0.097			<0.097		ug/L				NC	20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
2-Nitro-m-xylene	*100*		*70 - 130*
Perylene-d12	*99*		*70 - 130*
Triphenylphosphate	*106*		*70 - 130*

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

Lab Sample ID: MBL 380-54303/18-A
Matrix: Water
Analysis Batch: 55078

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54303

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		09/06/23 16:30	09/09/23 15:56	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1

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

Lab Sample ID: MBL 380-54303/18-A
Matrix: Water
Analysis Batch: 55078

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54303

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0		ng/L		09/06/23 16:30	09/09/23 15:56	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*100*		*50 - 200*	*09/06/23 16:30*	*09/09/23 15:56*	*1*
13C6 PFDA	*85*		*50 - 200*	*09/06/23 16:30*	*09/09/23 15:56*	*1*
13C5 PFHxA	*102*		*50 - 200*	*09/06/23 16:30*	*09/09/23 15:56*	*1*
13C4 PFHpA	*114*		*50 - 200*	*09/06/23 16:30*	*09/09/23 15:56*	*1*
13C8 PFOA	*97*		*50 - 200*	*09/06/23 16:30*	*09/09/23 15:56*	*1*
13C9 PFNA	*96*		*50 - 200*	*09/06/23 16:30*	*09/09/23 15:56*	*1*
13C7 PFUnA	*78*		*50 - 200*	*09/06/23 16:30*	*09/09/23 15:56*	*1*
13C2 PFDoA	*79*		*50 - 200*	*09/06/23 16:30*	*09/09/23 15:56*	*1*
13C4 PFBA	*96*		*50 - 200*	*09/06/23 16:30*	*09/09/23 15:56*	*1*
13C5 PFPeA	*86*		*50 - 200*	*09/06/23 16:30*	*09/09/23 15:56*	*1*
13C3 PFBS	*105*		*50 - 200*	*09/06/23 16:30*	*09/09/23 15:56*	*1*
13C3 PFHxS	*111*		*50 - 200*	*09/06/23 16:30*	*09/09/23 15:56*	*1*
13C8 PFOS	*91*		*50 - 200*	*09/06/23 16:30*	*09/09/23 15:56*	*1*
13C2-4:2-FTS	*82*		*50 - 200*	*09/06/23 16:30*	*09/09/23 15:56*	*1*
13C2-6:2-FTS	*77*		*50 - 200*	*09/06/23 16:30*	*09/09/23 15:56*	*1*
13C2-8:2-FTS	*65*		*50 - 200*	*09/06/23 16:30*	*09/09/23 15:56*	*1*

Lab Sample ID: LCS 380-54303/20-A
Matrix: Water
Analysis Batch: 55078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54303

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.1	56.4		ng/L		94	70 - 130

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

Lab Sample ID: LCS 380-54303/20-A
Matrix: Water
Analysis Batch: 55078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54303

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.1	61.5		ng/L		102	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.1	48.4		ng/L		81	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.1	54.5		ng/L		91	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.1	51.1		ng/L		85	70 - 130
Perfluorodecanoic acid (PFDA)	60.1	53.6		ng/L		89	70 - 130
Perfluorododecanoic acid (PFDoA)	60.1	52.6		ng/L		88	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.1	52.2		ng/L		87	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.1	53.4		ng/L		89	70 - 130
Perfluorohexanoic acid (PFHxA)	60.1	50.2		ng/L		83	70 - 130
Perfluorononanoic acid (PFNA)	60.1	53.7		ng/L		89	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.1	50.6		ng/L		84	70 - 130
Perfluorooctanoic acid (PFOA)	60.1	51.4		ng/L		85	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.1	53.8		ng/L		90	70 - 130
Perfluorobutanoic acid (PFBA)	60.1	52.0		ng/L		87	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.1	55.5		ng/L		92	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.1	50.0		ng/L		83	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.1	56.3		ng/L		94	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.1	45.7		ng/L		76	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	60.1	54.7		ng/L		91	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.1	51.5		ng/L		86	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.1	52.3		ng/L		87	70 - 130
Perfluoropentanoic acid (PFPeA)	60.1	54.0		ng/L		90	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.1	55.4		ng/L		92	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	60.1	50.0		ng/L		83	70 - 130

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*95*		*50 - 200*
13C6 PFDA	*89*		*50 - 200*
13C5 PFHxA	*100*		*50 - 200*
13C4 PFHpA	*110*		*50 - 200*
13C8 PFOA	*99*		*50 - 200*
13C9 PFNA	*97*		*50 - 200*
13C7 PFUnA	*85*		*50 - 200*
13C2 PFDoA	*89*		*50 - 200*
13C4 PFBA	*96*		*50 - 200*

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

Lab Sample ID: LCS 380-54303/20-A
Matrix: Water
Analysis Batch: 55078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54303

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C5 PFPeA	*90*		*50 - 200*
13C3 PFBS	*102*		*50 - 200*
13C3 PFHxS	*100*		*50 - 200*
13C8 PFOS	*92*		*50 - 200*
13C2-4:2-FTS	*78*		*50 - 200*
13C2-6:2-FTS	*73*		*50 - 200*
13C2-8:2-FTS	*68*		*50 - 200*

Lab Sample ID: LCSD 380-54303/21-A
Matrix: Water
Analysis Batch: 55078

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54303

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			60.1	59.6		ng/L		99	70 - 130	6	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			60.1	62.4		ng/L		104	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			60.1	47.9		ng/L		80	70 - 130	1	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			60.1	55.2		ng/L		92	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)			60.1	55.6		ng/L		92	70 - 130	8	30
Perfluorodecanoic acid (PFDA)			60.1	54.8		ng/L		91	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)			60.1	54.0		ng/L		90	70 - 130	3	30
Perfluoroheptanoic acid (PFHpA)			60.1	51.7		ng/L		86	70 - 130	1	30
Perfluorohexanesulfonic acid (PFHxS)			60.1	57.9		ng/L		96	70 - 130	8	30
Perfluorohexanoic acid (PFHxA)			60.1	54.7		ng/L		91	70 - 130	9	30
Perfluorononanoic acid (PFNA)			60.1	54.1		ng/L		90	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)			60.1	51.3		ng/L		85	70 - 130	1	30
Perfluorooctanoic acid (PFOA)			60.1	53.7		ng/L		89	70 - 130	4	30
Perfluoroundecanoic acid (PFUnA)			60.1	53.0		ng/L		88	70 - 130	2	30
Perfluorobutanoic acid (PFBA)			60.1	54.9		ng/L		91	70 - 130	5	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)			60.1	53.5		ng/L		89	70 - 130	4	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)			60.1	55.7		ng/L		93	70 - 130	11	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)			60.1	59.5		ng/L		99	70 - 130	6	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)			60.1	44.8		ng/L		75	70 - 130	2	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)			60.1	58.1		ng/L		97	70 - 130	6	30
Perfluoro-3-methoxypropanoic acid (PFMPA)			60.1	53.1		ng/L		88	70 - 130	3	30
Perfluoro-4-methoxybutanoic acid (PFMBA)			60.1	50.0		ng/L		83	70 - 130	4	30

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

Lab Sample ID: LCSD 380-54303/21-A
Matrix: Water
Analysis Batch: 55078

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54303

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoropentanoic acid (PFPeA)			60.1	54.8		ng/L		91	70 - 130	1	30
Perfluoroheptanesulfonic acid (PFHpS)			60.1	53.9		ng/L		90	70 - 130	3	30
Perfluoropentanesulfonic acid (PFPeS)			60.1	55.4		ng/L		92	70 - 130	10	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*105*		*50 - 200*
13C6 PFDA	*93*		*50 - 200*
13C5 PFHxA	*102*		*50 - 200*
13C4 PFHpA	*116*		*50 - 200*
13C8 PFOA	*102*		*50 - 200*
13C9 PFNA	*103*		*50 - 200*
13C7 PFUnA	*95*		*50 - 200*
13C2 PFDoA	*94*		*50 - 200*
13C4 PFBA	*97*		*50 - 200*
13C5 PFPeA	*95*		*50 - 200*
13C3 PFBS	*101*		*50 - 200*
13C3 PFHxS	*98*		*50 - 200*
13C8 PFOS	*97*		*50 - 200*
13C2-4:2-FTS	*77*		*50 - 200*
13C2-6:2-FTS	*78*		*50 - 200*
13C2-8:2-FTS	*75*		*50 - 200*

Lab Sample ID: MRL 380-54303/19-A
Matrix: Water
Analysis Batch: 55078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54303

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			2.00	1.89	J	ng/L		94	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			2.00	2.02	J	ng/L		101	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			2.00	1.63	J	ng/L		81	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			2.00	1.86	J	ng/L		93	50 - 150
Perfluorobutanesulfonic acid (PFBS)			2.00	1.76	J	ng/L		88	50 - 150
Perfluorodecanoic acid (PFDA)			2.00	1.74	J	ng/L		87	50 - 150
Perfluorododecanoic acid (PFDoA)			2.00	1.70	J	ng/L		85	50 - 150
Perfluoroheptanoic acid (PFHpA)			2.00	1.81	J	ng/L		91	50 - 150
Perfluorohexanesulfonic acid (PFHxS)			2.00	1.75	J	ng/L		87	50 - 150
Perfluorohexanoic acid (PFHxA)			2.00	1.93	J	ng/L		96	50 - 150
Perfluorononanoic acid (PFNA)			2.00	1.80	J	ng/L		90	50 - 150
Perfluorooctanesulfonic acid (PFOS)			2.00	1.68	J	ng/L		84	50 - 150
Perfluorooctanoic acid (PFOA)			2.00	2.01	J	ng/L		100	50 - 150

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

Lab Sample ID: MRL 380-54303/19-A
Matrix: Water
Analysis Batch: 55078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54303

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	2.00	1.66	J	ng/L		83	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.06	J	ng/L		103	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	1.88	J	ng/L		94	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	1.86	J	ng/L		93	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.02	J	ng/L		101	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	1.56	J	ng/L		78	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.00	1.82	J	ng/L		91	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	1.79	J	ng/L		89	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	1.60	J	ng/L		80	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	1.77	J	ng/L		88	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	1.75	J	ng/L		87	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	1.63	J	ng/L		82	50 - 150

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C3 HFPO-DA	*104*		*50 - 200*
13C6 PFDA	*89*		*50 - 200*
13C5 PFHxA	*104*		*50 - 200*
13C4 PFHpA	*116*		*50 - 200*
13C8 PFOA	*100*		*50 - 200*
13C9 PFNA	*101*		*50 - 200*
13C7 PFUnA	*86*		*50 - 200*
13C2 PFDoA	*86*		*50 - 200*
13C4 PFBA	*97*		*50 - 200*
13C5 PFPeA	*95*		*50 - 200*
13C3 PFBS	*108*		*50 - 200*
13C3 PFHxS	*106*		*50 - 200*
13C8 PFOS	*95*		*50 - 200*
13C2-4:2-FTS	*82*		*50 - 200*
13C2-6:2-FTS	*79*		*50 - 200*
13C2-8:2-FTS	*71*		*50 - 200*

Lab Sample ID: 380-60043-C-3-B LMS
Matrix: Water
Analysis Batch: 55078

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 54303

Analyte	Sample Result	Sample Qualifier	Spike Added	LMS Result	LMS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.01	2.06		ng/L		102	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.01	2.25		ng/L		112	50 - 150

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

Lab Sample ID: 380-60043-C-3-B LMS
Matrix: Water
Analysis Batch: 55078

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 54303

Analyte	Sample Result	Sample Qualifier	Spike Added	LMS Result	LMS Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.01	1.78	J	ng/L		89	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.01	2.01		ng/L		100	50 - 150
Perfluorobutanesulfonic acid (PFBS)	5.2		2.01	7.42		ng/L		108	50 - 150
Perfluorodecanoic acid (PFDA)	<2.0		2.01	2.35		ng/L		117	50 - 150
Perfluorododecanoic acid (PFDoA)	<2.0		2.01	2.04		ng/L		101	50 - 150
Perfluoroheptanoic acid (PFHpA)	3.0		2.01	4.84		ng/L		91	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.01	3.37		ng/L		107	50 - 150
Perfluorohexanoic acid (PFHxA)	6.7		2.01	8.60		ng/L		95	50 - 150
Perfluorononanoic acid (PFNA)	<2.0		2.01	3.30		ng/L		99	50 - 150
Perfluorooctanesulfonic acid (PFOS)	13		2.01	15.3	4	ng/L		111	50 - 150
Perfluorooctanoic acid (PFOA)	14		2.01	16.0	4	ng/L		109	50 - 150
Perfluoroundecanoic acid (PFUnA)	<2.0		2.01	2.06		ng/L		103	50 - 150
Perfluorobutanoic acid (PFBA)	5.4	F1	2.01	6.71		ng/L		66	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.01	2.14		ng/L		106	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.01	2.14		ng/L		107	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.01	2.49		ng/L		124	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.01	1.93	J	ng/L		96	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.01	2.17		ng/L		108	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0	F1	2.01	3.30	F1	ng/L		164	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.01	2.27		ng/L		113	50 - 150
Perfluoropentanoic acid (PFPeA)	6.0		2.01	7.70		ng/L		86	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.01	2.22		ng/L		111	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.01	2.31		ng/L		115	50 - 150

Isotope Dilution	*LMS %Recovery*	*LMS Qualifier*	*Limits*
13C3 HFPO-DA	*96*		*50 - 200*
13C6 PFDA	*90*		*50 - 200*
13C5 PFHxA	*90*		*50 - 200*
13C4 PFHpA	*104*		*50 - 200*
13C8 PFOA	*91*		*50 - 200*
13C9 PFNA	*92*		*50 - 200*
13C7 PFUnA	*85*		*50 - 200*
13C2 PFDoA	*88*		*50 - 200*
13C4 PFBA	*92*		*50 - 200*
13C5 PFPeA	*179*		*50 - 200*
13C3 PFBS	*98*		*50 - 200*
13C3 PFHxS	*105*		*50 - 200*

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

Lab Sample ID: 380-60043-C-3-B LMS
Matrix: Water
Analysis Batch: 55078

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 54303

Isotope Dilution	LMS %Recovery	LMS Qualifier	Limits
13C8 PFOS	97		50 - 200
13C2-4:2-FTS	110		50 - 200
13C2-6:2-FTS	85		50 - 200
13C2-8:2-FTS	90		50 - 200

Lab Sample ID: 380-60043-D-3-B LMSD
Matrix: Water
Analysis Batch: 55078

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 54303

Analyte	Sample Result	Sample Qualifier	Spike Added	LMSD Result	LMSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.02	1.97	J	ng/L		98	50 - 150	4	50
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.02	2.20		ng/L		109	50 - 150	2	50
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.02	1.73	J	ng/L		86	50 - 150	3	50
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.02	1.97	J	ng/L		98	50 - 150	2	50
Perfluorobutanesulfonic acid (PFBS)	5.2		2.02	7.07		ng/L		91	50 - 150	5	50
Perfluorodecanoic acid (PFDA)	<2.0		2.02	2.24		ng/L		111	50 - 150	5	50
Perfluorododecanoic acid (PFDoA)	<2.0		2.02	1.93	J	ng/L		96	50 - 150	5	50
Perfluoroheptanoic acid (PFHpA)	3.0		2.02	5.02		ng/L		100	50 - 150	4	50
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.02	3.24		ng/L		100	50 - 150	4	50
Perfluorohexanoic acid (PFHxA)	6.7		2.02	8.10		ng/L		70	50 - 150	6	50
Perfluorononanoic acid (PFNA)	<2.0		2.02	3.13		ng/L		90	50 - 150	6	50
Perfluorooctanesulfonic acid (PFOS)	13		2.02	14.9	4	ng/L		89	50 - 150	3	50
Perfluorooctanoic acid (PFOA)	14		2.02	15.4	4	ng/L		78	50 - 150	4	50
Perfluoroundecanoic acid (PFUnA)	<2.0		2.02	2.03		ng/L		101	50 - 150	1	50
Perfluorobutanoic acid (PFBA)	5.4	F1	2.02	6.34	F1	ng/L		47	50 - 150	6	50
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.02	2.03		ng/L		101	50 - 150	5	50
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.02	2.26		ng/L		112	50 - 150	5	50
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.02	2.36		ng/L		117	50 - 150	5	50
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.02	1.81	J	ng/L		90	50 - 150	7	50
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.02	2.06		ng/L		102	50 - 150	5	50
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0	F1	2.02	3.18	F1	ng/L		158	50 - 150	4	50
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.02	2.32		ng/L		115	50 - 150	2	50
Perfluoropentanoic acid (PFPeA)	6.0		2.02	8.08		ng/L		104	50 - 150	5	50
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.02	2.20		ng/L		109	50 - 150	1	50

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

Lab Sample ID: 380-60043-D-3-B LMSD
Matrix: Water
Analysis Batch: 55078

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 54303

Analyte	Sample Result	Sample Qualifier	Spike Added	LMSD Result	LMSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.02	2.14		ng/L		106	50 - 150	7	50

Isotope Dilution	*LMSD %Recovery*	*LMSD Qualifier*	*Limits*
13C3 HFPO-DA	*104*		*50 - 200*
13C6 PFDA	*93*		*50 - 200*
13C5 PFHxA	*91*		*50 - 200*
13C4 PFHpA	*108*		*50 - 200*
13C8 PFOA	*96*		*50 - 200*
13C9 PFNA	*97*		*50 - 200*
13C7 PFUnA	*86*		*50 - 200*
13C2 PFDoA	*93*		*50 - 200*
13C4 PFBA	*96*		*50 - 200*
13C5 PFPeA	*184*		*50 - 200*
13C3 PFBS	*98*		*50 - 200*
13C3 PFHxS	*105*		*50 - 200*
13C8 PFOS	*97*		*50 - 200*
13C2-4:2-FTS	*112*		*50 - 200*
13C2-6:2-FTS	*89*		*50 - 200*
13C2-8:2-FTS	*85*		*50 - 200*

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

Lab Sample ID: MBL 380-53457/23-A
Matrix: Water
Analysis Batch: 53639

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53457

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		08/28/23 07:58	08/29/23 14:18	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		08/28/23 07:58	08/29/23 14:18	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		08/28/23 07:58	08/29/23 14:18	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0		ng/L		08/28/23 07:58	08/29/23 14:18	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0		ng/L		08/28/23 07:58	08/29/23 14:18	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		08/28/23 07:58	08/29/23 14:18	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		08/28/23 07:58	08/29/23 14:18	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		08/28/23 07:58	08/29/23 14:18	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		08/28/23 07:58	08/29/23 14:18	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		08/28/23 07:58	08/29/23 14:18	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		08/28/23 07:58	08/29/23 14:18	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		08/28/23 07:58	08/29/23 14:18	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		08/28/23 07:58	08/29/23 14:18	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0		ng/L		08/28/23 07:58	08/29/23 14:18	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0		ng/L		08/28/23 07:58	08/29/23 14:18	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		08/28/23 07:58	08/29/23 14:18	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		08/28/23 07:58	08/29/23 14:18	1

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

Lab Sample ID: MBL 380-53457/23-A
Matrix: Water
Analysis Batch: 53639

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53457

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		08/28/23 07:58	08/29/23 14:18	1

Surrogate	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*108*		*70 - 130*	*08/28/23 07:58*	*08/29/23 14:18*	*1*
13C2 PFHxA	*111*		*70 - 130*	*08/28/23 07:58*	*08/29/23 14:18*	*1*
13C2 PFDA	*110*		*70 - 130*	*08/28/23 07:58*	*08/29/23 14:18*	*1*
13C3-GenX	*101*		*70 - 130*	*08/28/23 07:58*	*08/29/23 14:18*	*1*

Lab Sample ID: LCS 380-53457/25-A
Matrix: Water
Analysis Batch: 53639

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53457

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			25.1	24.9		ng/L		99	70 - 130		
Perfluorooctanesulfonic acid (PFOS)			23.2	25.3		ng/L		109	70 - 130		
Perfluoroundecanoic acid (PFUnA)			25.1	28.0		ng/L		112	70 - 130		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			25.1	27.7		ng/L		110	70 - 130		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			25.1	23.2		ng/L		92	70 - 130		
Perfluorohexanoic acid (PFHxA)			25.1	27.0		ng/L		108	70 - 130		
Perfluorododecanoic acid (PFDoA)			25.1	27.3		ng/L		109	70 - 130		
Perfluorooctanoic acid (PFOA)			25.1	27.9		ng/L		111	70 - 130		
Perfluorodecanoic acid (PFDA)			25.1	28.2		ng/L		112	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)			22.9	25.6		ng/L		112	70 - 130		
Perfluorobutanesulfonic acid (PFBS)			22.2	23.6		ng/L		107	70 - 130		
Perfluoroheptanoic acid (PFHpA)			25.1	24.7		ng/L		99	70 - 130		
Perfluorononanoic acid (PFNA)			25.1	31.6		ng/L		126	70 - 130		
Perfluorotetradecanoic acid (PFTA)			25.1	25.9		ng/L		103	70 - 130		
Perfluorotridecanoic acid (PFTrDA)			25.1	27.9		ng/L		111	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			23.4	27.3		ng/L		117	70 - 130		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			23.7	25.4		ng/L		107	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			23.7	26.4		ng/L		111	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
d5-NEtFOSAA	*95*		*70 - 130*
13C2 PFHxA	*108*		*70 - 130*
13C2 PFDA	*113*		*70 - 130*

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

Lab Sample ID: LCS 380-53457/25-A
Matrix: Water
Analysis Batch: 53639

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53457

Surrogate	LCS %Recovery	LCS Qualifier	Limits
13C3-GenX	103		70 - 130

Lab Sample ID: LCSD 380-53457/26-A
Matrix: Water
Analysis Batch: 53639

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53457

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			25.1	27.3		ng/L		109	70 - 130	9	30
Perfluorooctanesulfonic acid (PFOS)			23.2	29.1		ng/L		125	70 - 130	14	30
Perfluoroundecanoic acid (PFUnA)			25.1	31.0		ng/L		123	70 - 130	10	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			25.1	28.3		ng/L		113	70 - 130	2	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			25.1	28.0		ng/L		112	70 - 130	19	30
Perfluorohexanoic acid (PFHxA)			25.1	27.9		ng/L		111	70 - 130	3	30
Perfluorododecanoic acid (PFDoA)			25.1	30.0		ng/L		119	70 - 130	9	30
Perfluorooctanoic acid (PFOA)			25.1	31.3		ng/L		125	70 - 130	12	30
Perfluorodecanoic acid (PFDA)			25.1	29.7		ng/L		118	70 - 130	5	30
Perfluorohexanesulfonic acid (PFHxS)			22.9	28.7		ng/L		125	70 - 130	12	30
Perfluorobutanesulfonic acid (PFBS)			22.2	27.0		ng/L		122	70 - 130	13	30
Perfluoroheptanoic acid (PFHpA)			25.1	28.8		ng/L		115	70 - 130	15	30
Perfluorononanoic acid (PFNA)			25.1	32.1		ng/L		128	70 - 130	2	30
Perfluorotetradecanoic acid (PFTA)			25.1	28.1		ng/L		112	70 - 130	8	30
Perfluorotridecanoic acid (PFTrDA)			25.1	30.2		ng/L		120	70 - 130	8	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			23.5	29.6		ng/L		126	70 - 130	8	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			23.7	28.9		ng/L		122	70 - 130	13	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			23.7	29.5		ng/L		124	70 - 130	11	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
d5-NEtFOSAA	111		70 - 130
13C2 PFHxA	123		70 - 130
13C2 PFDA	124		70 - 130
13C3-GenX	125		70 - 130

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

Lab Sample ID: MRL 380-53457/24-A
Matrix: Water
Analysis Batch: 53639

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53457

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.37	J	ng/L		118	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.86	2.06	J	ng/L		111	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.41	J	ng/L		120	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.29	J	ng/L		114	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.20	J	ng/L		110	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.27	J	ng/L		113	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.35	J	ng/L		117	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.45	J	ng/L		122	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.31	J	ng/L		115	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.83	2.10	J	ng/L		115	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.77	2.02	J	ng/L		114	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.28	J	ng/L		114	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.66	J	ng/L		133	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.21	J	ng/L		110	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.47	J	ng/L		123	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	1.87	2.24	J	ng/L		120	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.89	2.17	J	ng/L		115	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.89	2.33	J	ng/L		123	50 - 150

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
d5-NEtFOSAA	*105*		*70 - 130*
13C2 PFHxA	*117*		*70 - 130*
13C2 PFDA	*122*		*70 - 130*
13C3-GenX	*117*		*70 - 130*

Lab Sample ID: 380-60167-V-1-A MS
Matrix: Water
Analysis Batch: 53639

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53457

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	26.8		ng/L		107	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		23.2	27.7		ng/L		114	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	28.1		ng/L		112	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	27.5		ng/L		109	70 - 130

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

Lab Sample ID: 380-60167-V-1-A MS
Matrix: Water
Analysis Batch: 53639

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53457

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	25.3		ng/L		101	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	27.5		ng/L		104	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	26.7		ng/L		106	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		25.1	31.4		ng/L		120	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		25.1	29.1		ng/L		116	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		22.9	28.3		ng/L		121	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		22.2	24.0		ng/L		102	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	27.5		ng/L		106	70 - 130
Perfluorononanoic acid (PFNA)	<2.0	F1	25.1	32.5		ng/L		130	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	26.3		ng/L		105	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	28.6		ng/L		114	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		23.5	27.6		ng/L		118	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		23.7	26.6		ng/L		112	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		23.7	29.2		ng/L		123	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
d5-NEtFOSAA	*92*		*70 - 130*
13C2 PFHxA	*103*		*70 - 130*
13C2 PFDA	*106*		*70 - 130*
13C3-GenX	*129*		*70 - 130*

Lab Sample ID: 380-60167-W-1-A MSD
Matrix: Water
Analysis Batch: 53639

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53457

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		25.1	29.5		ng/L		118	70 - 130	10	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		23.2	28.2		ng/L		116	70 - 130	2	30
Perfluoroundecanoic acid (PFUnA)	<2.0		25.1	30.0		ng/L		119	70 - 130	6	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		25.1	28.0		ng/L		112	70 - 130	2	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		25.1	25.7		ng/L		103	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		25.1	30.4		ng/L		115	70 - 130	10	30
Perfluorododecanoic acid (PFDoA)	<2.0		25.1	28.3		ng/L		113	70 - 130	6	30
Perfluorooctanoic acid (PFOA)	<2.0		25.1	32.3		ng/L		123	70 - 130	3	30
Perfluorodecanoic acid (PFDA)	<2.0		25.1	29.6		ng/L		118	70 - 130	2	30

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

Lab Sample ID: 380-60167-W-1-A MSD
Matrix: Water
Analysis Batch: 53639

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53457

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	<2.0		22.9	27.7		ng/L		119	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		22.2	25.5		ng/L		109	70 - 130	6	30
Perfluoroheptanoic acid (PFHpA)	<2.0		25.1	28.0		ng/L		108	70 - 130	2	30
Perfluorononanoic acid (PFNA)	<2.0	F1	25.1	33.4	F1	ng/L		133	70 - 130	3	30
Perfluorotetradecanoic acid (PFTA)	<2.0		25.1	27.7		ng/L		111	70 - 130	5	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		25.1	29.9		ng/L		119	70 - 130	4	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		23.5	28.6		ng/L		122	70 - 130	3	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		23.7	26.4		ng/L		111	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		23.7	29.6		ng/L		125	70 - 130	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
d5-NEtFOSAA	*90*		*70 - 130*
13C2 PFHxA	*106*		*70 - 130*
13C2 PFDA	*108*		*70 - 130*
13C3-GenX	*128*		*70 - 130*

GC/MS Semi VOA

Prep Batch: 53151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-60202-1	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	525.2	
380-60202-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	
MB 380-53151/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-53151/23-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-53151/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-53151/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-60067-B-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-60069-B-2-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 53371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-60202-1	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	525.2	53151
380-60202-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	53151
MB 380-53151/21-A	Method Blank	Total/NA	Water	525.2	53151
LCS 380-53151/23-A	Lab Control Sample	Total/NA	Water	525.2	53151
LCSD 380-53151/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	53151
MRL 380-53151/22-A	Lab Control Sample	Total/NA	Water	525.2	53151
380-60067-B-1-A MS	Matrix Spike	Total/NA	Water	525.2	53151
380-60069-B-2-A DU	Duplicate	Total/NA	Water	525.2	53151

LCMS

Prep Batch: 53457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-60202-1	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	537.1 DW	
380-60202-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	537.1 DW	
380-60202-5	FB AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Water	537.1 DW	
380-60202-6	FB AIEA GULCH WELLS PUMP 2	Total/NA	Water	537.1 DW	
MBL 380-53457/23-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-53457/25-A	Lab Control Sample	Total/NA	Water	537.1 DW	
LCSD 380-53457/26-A	Lab Control Sample Dup	Total/NA	Water	537.1 DW	
MRL 380-53457/24-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-60167-V-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-60167-W-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 53639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-60202-1	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	537.1	53457
380-60202-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	537.1	53457
380-60202-5	FB AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Water	537.1	53457
380-60202-6	FB AIEA GULCH WELLS PUMP 2	Total/NA	Water	537.1	53457
MBL 380-53457/23-A	Method Blank	Total/NA	Water	537.1	53457
LCS 380-53457/25-A	Lab Control Sample	Total/NA	Water	537.1	53457
LCSD 380-53457/26-A	Lab Control Sample Dup	Total/NA	Water	537.1	53457
MRL 380-53457/24-A	Lab Control Sample	Total/NA	Water	537.1	53457
380-60167-V-1-A MS	Matrix Spike	Total/NA	Water	537.1	53457
380-60167-W-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	53457

Prep Batch: 54303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-60202-1	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	533	

LCMS (Continued)

Prep Batch: 54303 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-60202-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	533	
380-60202-5	FB AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Water	533	
380-60202-6	FB AIEA GULCH WELLS PUMP 2	Total/NA	Water	533	
MBL 380-54303/18-A	Method Blank	Total/NA	Water	533	
LCS 380-54303/20-A	Lab Control Sample	Total/NA	Water	533	
LCSD 380-54303/21-A	Lab Control Sample Dup	Total/NA	Water	533	
MRL 380-54303/19-A	Lab Control Sample	Total/NA	Water	533	
380-60043-C-3-B LMS	Matrix Spike	Total/NA	Water	533	
380-60043-D-3-B LMSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 55078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-60202-1	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	533	54303
380-60202-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	533	54303
380-60202-5	FB AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Water	533	54303
380-60202-6	FB AIEA GULCH WELLS PUMP 2	Total/NA	Water	533	54303
MBL 380-54303/18-A	Method Blank	Total/NA	Water	533	54303
LCS 380-54303/20-A	Lab Control Sample	Total/NA	Water	533	54303
LCSD 380-54303/21-A	Lab Control Sample Dup	Total/NA	Water	533	54303
MRL 380-54303/19-A	Lab Control Sample	Total/NA	Water	533	54303
380-60043-C-3-B LMS	Matrix Spike	Total/NA	Water	533	54303
380-60043-D-3-B LMSD	Matrix Spike Duplicate	Total/NA	Water	533	54303

Lab Chronicle

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

Job ID: 380-60202-1

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

Lab Sample ID: 380-60202-1
Date Collected: 08/21/23 11:14
Matrix: Drinking Water
Date Received: 08/23/23 10:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			53151	OTM3	EA POM	08/25/23 07:45
Total/NA	Analysis	525.2		1	53371	Q8LA	EA POM	08/26/23 18:08
Total/NA	Prep	533			54303	UMV1	EA POM	09/06/23 16:30
Total/NA	Analysis	533		1	55078	UKDT	EA POM	09/09/23 17:41
Total/NA	Prep	537.1 DW			53457	US1B	EA POM	08/28/23 07:58
Total/NA	Analysis	537.1		1	53639	UKDT	EA POM	08/29/23 16:32

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-60202-2
Date Collected: 08/21/23 10:39
Matrix: Drinking Water
Date Received: 08/23/23 10:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			53151	OTM3	EA POM	08/25/23 09:10
Total/NA	Analysis	525.2		1	53371	Q8LA	EA POM	08/26/23 18:28
Total/NA	Prep	533			54303	UMV1	EA POM	09/06/23 16:30
Total/NA	Analysis	533		1	55078	UKDT	EA POM	09/09/23 17:51
Total/NA	Prep	537.1 DW			53457	US1B	EA POM	08/28/23 07:58
Total/NA	Analysis	537.1		1	53639	UKDT	EA POM	08/29/23 16:42

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

Lab Sample ID: 380-60202-5
Date Collected: 08/21/23 11:14
Matrix: Water
Date Received: 08/23/23 10:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			54303	UMV1	EA POM	09/06/23 16:30
Total/NA	Analysis	533		1	55078	UKDT	EA POM	09/09/23 18:00
Total/NA	Prep	537.1 DW			53457	US1B	EA POM	08/28/23 07:58
Total/NA	Analysis	537.1		1	53639	UKDT	EA POM	08/29/23 17:01

Client Sample ID: FB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-60202-6
Date Collected: 08/21/23 10:39
Matrix: Water
Date Received: 08/23/23 10:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			54303	UMV1	EA POM	09/06/23 16:30
Total/NA	Analysis	533		1	55078	UKDT	EA POM	09/09/23 18:10
Total/NA	Prep	537.1 DW			53457	US1B	EA POM	08/28/23 07:58
Total/NA	Analysis	537.1		1	53639	UKDT	EA POM	08/29/23 17:10

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: 380-60202-1

Laboratory: Eurofins Eaton Analytical Pomona

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

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

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

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

Laboratory: Eurofins Eaton Analytical Pomona (Continued)

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

Authority	Program	Identification Number	Expiration Date

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

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

Laboratory: Eurofins Eaton Analytical Pomona (Continued)

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

Authority	Program	Identification Number	Expiration Date

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

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

Method Summary

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

Job ID: 380-60202-1

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: 380-60202-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-60202-1	AIEA WELLS PUMPS 1&2 (260) P2	Drinking Water	08/21/23 11:14	08/23/23 10:25
380-60202-2	AIEA GULCH WELLS PUMP 2	Drinking Water	08/21/23 10:39	08/23/23 10:25
380-60202-5	FB AIEA WELLS PUMPS 1&2 (260) P2	Water	08/21/23 11:14	08/23/23 10:25
380-60202-6	FB AIEA GULCH WELLS PUMP 2	Water	08/21/23 10:39	08/23/23 10:25

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

Chain of Custody Record

eurofins

Client Information	Sampler: BAILEY	Lab PM: Arada Rachelle	Carrier Tracking No(s):	COC No: 380-27941-2757 2
Client Contact: Dr Ron Fenstermacher	Phone: 808-748-5840	E-Mail: Rachelle Arada@et euronisus com	State of Origin:	Page: Page 1 of 2
Company: City & County of Honolulu	PWSID:			Job #:
Address: 630 South Beretania Street, Chemistry Lab	Due Date Requested:			
City: Honolulu	TAT Requested (days):			
State Zip: HI 96843	Compliance Project ∆ No			
Phone: 808-748-5091 (tel)	PO #: C20525101 exp 05312023			
Email: rfenstemacher@hbws org	WO #:			
Project Name: RED-HILL/HBWS sites Event Desc. RUSH Weekly Red Hill	Project #: 38001111			
Site:	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	SUBCONTRACT - 8015 Gas (Purgable) LL (EAL)	SUBCONTRACT - 8915 Diesel LL (EAL) and Motor Oil	525 2_PREC - (MOD) 525plus PLUS TICs	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	537 1_DW_PREC - 537 1 Full List	533 - All Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code		X	X	R	R	RA		RA	Y	N	X	
AIEA WELLS PUMPS 1&2 (260) P2	21-Aug-2023	1114	G	Water			2		2	2	4				
AIEA GULCH WELLS PUMP2	21-Aug-2023	1039	G	Water			2		2	2	4				
TB AIEA WELLS PUMPS 1&2 (260)	21-Aug-2023	1114		Water							2				
TB AIEA GULCH WELLS PUMP2	21-Aug-2023	1039		Water							2				

380-60202 COC

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:

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: 7731 3595 6410/6742/6731/6720

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
BAILEY	8/22/2023 1400	HBWS	4401	8/23/23 1025	EEAP

Custody Seals Intact ∆ Yes ∆ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 6CBA / 2.9 / 2.0 / 4.6 / 4.1 → 5.7 / 2.3 / 4.4 / 3.9 LEZ

Ver 01 16/2019

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

Chain of Custody Record

eurofins

Client Information	Sampler: BAILEY	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-27941-2757 2
Client Contact: Dr Ron Fenstermacher	Phone: 808-748-5840	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin:	Page: Page 2 of 2
Company: City & County of Honolulu	PWSID:	Analysis Requested		Job #:
Address: 630 South Beretania Street, Chemistry Lab	Due Date Requested:			
City: Honolulu	TAT Requested (days):			
State, Zip: HI, 96843	Compliance Project: Δ No			
Phone: 808-748-5091 (tel)	PO #: C20525101 exp 05312023			
Email: rfenstemacher@hbws.org	WO #:			
Project Name: RED-HILL/HBWS sites Event Desc. RUSH Weekly Red Hill	Project #: 38001111			
Site:	SSOW#:			

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	SUBCONTRACT - 8015 Gas (Purgable) LL (EAL)	SUBCONTRACT - 8915 Diesel LL (EAL) and Motor Oil	525.2_PREC - (MOD) 525plus PLUS TICs	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	537.1_DW_PREC - 537.1 Full List	533 - All Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code				R	R	RA		RA	Y	N		
AIEA WELLS PUMPS 1&2 (260)P2	21-Aug-2023	1114	G	Water								3	3		
AIEA GULCH WELLS PUMP2	21-Aug-2023	1039	G	Water								3	3		
FB AIEA WELLS PUMPS 1&2 (260)	21-Aug-2023	1114		Water								1	1		
FB AIEA GULCH WELLS PUMP2	21-Aug-2023	1039		Water								1	1		

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

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

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

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
BAILEY	8/23/2023 1400	HBWS	4401	8/23/23 1025	ECAP
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
		5.7/0.8/4.4/3.9 GEL

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-60202-1

Login Number: 60202
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	