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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

380-59313-1

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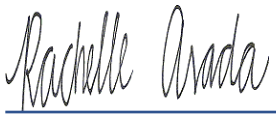
The test results in this report relate only to the samples as received by the laboratory and meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed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

Definitions/Glossary

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

Job ID: 380-59313-1

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

Glossary

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

Job ID: 380-59313-1

Laboratory: Eurofins Eaton Analytical Pomona

Narrative

Job Narrative
380-59313-1

Comments
No additional comments.

Receipt
The samples were received on 8/16/2023 10:10 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.3º C and 3.3º C.

GC/MS Semi VOA
Method 525.2: The continuing calibration verification (CCV) associated with batch 380-52500 recovered above the upper control limit for Hexachlorocyclopentadiene and Pendimethalin (Penoxaline). 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 (380-59313-1), AIEA GULCH WELLS PUMP 2 (380-59313-2) and (CCV 380-52500/2).

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: 380-59313-1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2 — Lab Sample ID: 380-59313-1
PWSID Number: HI0000331

No Detections.

Client Sample ID: AIEA GULCH WELLS PUMP 2 — Lab Sample ID: 380-59313-2
PWSID Number: HI0000331

No Detections.

Client Sample ID: FB: AIEA WELLS PUMPS 1&2 (260) P2 — Lab Sample ID: 380-59313-5

No Detections.

Client Sample ID: FB: AIEA GULCH WELLS PUMP 2 — Lab Sample ID: 380-59313-6

No Detections.

This Detection Summary does not include radiochemical test results.

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

Job ID: 380-59313-1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
Date Collected: 08/14/23 11:14
Date Received: 08/16/23 10:10

Lab Sample ID: 380-59313-1
Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
2,4'-DDD	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
2,4'-DDE	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
2,4'-DDT	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
2,4-Dinitrotoluene	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
2,6-Dinitrotoluene	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
2-Methylnaphthalene	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
4,4'-DDD	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
4,4'-DDE	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
4,4'-DDT	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Acenaphthene	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Acenaphthylene	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Acetochlor	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Alachlor	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 17:48	1
alpha-BHC	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
alpha-Chlordane	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 17:48	1
Anthracene	<0.020		0.020		ug/L		08/17/23 12:00	08/20/23 17:48	1
Atrazine	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 17:48	1
Benz(a)anthracene	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 17:48	1
Benzo[a]pyrene	<0.020		0.020		ug/L		08/17/23 12:00	08/20/23 17:48	1
Benzo[b]fluoranthene	<0.020		0.020		ug/L		08/17/23 12:00	08/20/23 17:48	1
Benzo[g,h,i]perylene	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 17:48	1
Benzo[k]fluoranthene	<0.020		0.020		ug/L		08/17/23 12:00	08/20/23 17:48	1
beta-BHC	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59		ug/L		08/17/23 12:00	08/20/23 17:48	1
Bromacil	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Butachlor	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 17:48	1
Butylbenzylphthalate	<0.49		0.49		ug/L		08/17/23 12:00	08/20/23 17:48	1
Chlorobenzilate	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Chloroneb	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Chlorpyrifos	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 17:48	1
Chrysene	<0.020		0.020		ug/L		08/17/23 12:00	08/20/23 17:48	1
delta-BHC	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Di(2-ethylhexyl)adipate	<0.59		0.59		ug/L		08/17/23 12:00	08/20/23 17:48	1
Dibenz(a,h)anthracene	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 17:48	1
Diclorvos (DDVP)	<0.049	^3+ *+	0.049		ug/L		08/17/23 12:00	08/20/23 17:48	1
Dieldrin	<0.20		0.20		ug/L		08/17/23 12:00	08/20/23 17:48	1
Diethylphthalate	<0.49		0.49		ug/L		08/17/23 12:00	08/20/23 17:48	1
Dimethylphthalate	<0.49		0.49		ug/L		08/17/23 12:00	08/20/23 17:48	1
Di-n-butyl phthalate	<0.98		0.98		ug/L		08/17/23 12:00	08/20/23 17:48	1
Di-n-octyl phthalate	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Endosulfan I (Alpha)	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Endosulfan II (Beta)	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Endosulfan sulfate	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Endrin	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Endrin aldehyde	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
EPTC	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Fluoranthene	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
Date Collected: 08/14/23 11:14
Date Received: 08/16/23 10:10

Lab Sample ID: 380-59313-1
Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 17:48	1
gamma-Chlordane	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 17:48	1
Heptachlor	<0.039		0.039		ug/L		08/17/23 12:00	08/20/23 17:48	1
Heptachlor epoxide (isomer B)	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 17:48	1
Hexachlorobenzene	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 17:48	1
Hexachlorocyclopentadiene	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 17:48	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 17:48	1
Isophorone	<0.49		0.49		ug/L		08/17/23 12:00	08/20/23 17:48	1
Lindane	<0.039		0.039		ug/L		08/17/23 12:00	08/20/23 17:48	1
Malathion	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Methoxychlor	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Metolachlor	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 17:48	1
Molinate	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Naphthalene	<0.30		0.30		ug/L		08/17/23 12:00	08/20/23 17:48	1
Parathion	<0.098	*+	0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Pendimethalin (Penoxaline)	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Phenanthrene	<0.039		0.039		ug/L		08/17/23 12:00	08/20/23 17:48	1
Propachlor	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 17:48	1
Pyrene	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 17:48	1
Simazine	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 17:48	1
Terbacil	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Terbuthylazine	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1
Thiobencarb	<0.20		0.20		ug/L		08/17/23 12:00	08/20/23 17:48	1
Total Permethrin (mixed isomers)	<0.20		0.20		ug/L		08/17/23 12:00	08/20/23 17:48	1
trans-Nonachlor	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 17:48	1
Trifluralin	<0.098		0.098		ug/L		08/17/23 12:00	08/20/23 17:48	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
tri(2-Ethylhexyl) trimellitate	*0.81*	*T J N*	*ug/L*		*15.15*	*3319-31-1*	*08/17/23 12:00*	*08/20/23 17:48*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*97*		*70 - 130*	*08/17/23 12:00*	*08/20/23 17:48*	*1*
Perylene-d12	*95*		*70 - 130*	*08/17/23 12:00*	*08/20/23 17:48*	*1*
Triphenylphosphate	*120*		*70 - 130*	*08/17/23 12:00*	*08/20/23 17:48*	*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		08/30/23 14:48	09/01/23 18:25	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1

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

Job ID: 380-59313-1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
Date Collected: 08/14/23 11:14
Date Received: 08/16/23 10:10

Lab Sample ID: 380-59313-1
Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 18:25	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*94*		*50 - 200*	*08/30/23 14:48*	*09/01/23 18:25*	*1*
13C6 PFDA	*95*		*50 - 200*	*08/30/23 14:48*	*09/01/23 18:25*	*1*
13C5 PFHxA	*103*		*50 - 200*	*08/30/23 14:48*	*09/01/23 18:25*	*1*
13C4 PFHpA	*99*		*50 - 200*	*08/30/23 14:48*	*09/01/23 18:25*	*1*
13C8 PFOA	*100*		*50 - 200*	*08/30/23 14:48*	*09/01/23 18:25*	*1*
13C9 PFNA	*98*		*50 - 200*	*08/30/23 14:48*	*09/01/23 18:25*	*1*
13C7 PFUnA	*96*		*50 - 200*	*08/30/23 14:48*	*09/01/23 18:25*	*1*
13C2 PFDoA	*99*		*50 - 200*	*08/30/23 14:48*	*09/01/23 18:25*	*1*
13C4 PFBA	*100*		*50 - 200*	*08/30/23 14:48*	*09/01/23 18:25*	*1*
13C5 PFPeA	*97*		*50 - 200*	*08/30/23 14:48*	*09/01/23 18:25*	*1*
13C3 PFBS	*100*		*50 - 200*	*08/30/23 14:48*	*09/01/23 18:25*	*1*
13C3 PFHxS	*95*		*50 - 200*	*08/30/23 14:48*	*09/01/23 18:25*	*1*
13C8 PFOS	*100*		*50 - 200*	*08/30/23 14:48*	*09/01/23 18:25*	*1*
13C2-4:2-FTS	*108*		*50 - 200*	*08/30/23 14:48*	*09/01/23 18:25*	*1*
13C2-6:2-FTS	*107*		*50 - 200*	*08/30/23 14:48*	*09/01/23 18:25*	*1*
13C2-8:2-FTS	*106*		*50 - 200*	*08/30/23 14:48*	*09/01/23 18:25*	*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		08/22/23 10:08	08/25/23 04:32	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		08/22/23 10:08	08/25/23 04:32	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/22/23 10:08	08/25/23 04:32	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		08/22/23 10:08	08/25/23 04:32	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		08/22/23 10:08	08/25/23 04:32	1

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

Lab Sample ID: 380-59313-1

Date Collected: 08/14/23 11:14

Matrix: Drinking Water

Date Received: 08/16/23 10:10

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		08/22/23 10:08	08/25/23 04:32	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		08/22/23 10:08	08/25/23 04:32	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		08/22/23 10:08	08/25/23 04:32	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		08/22/23 10:08	08/25/23 04:32	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		08/22/23 10:08	08/25/23 04:32	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		08/22/23 10:08	08/25/23 04:32	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/22/23 10:08	08/25/23 04:32	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/22/23 10:08	08/25/23 04:32	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		08/22/23 10:08	08/25/23 04:32	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		08/22/23 10:08	08/25/23 04:32	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		08/22/23 10:08	08/25/23 04:32	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		08/22/23 10:08	08/25/23 04:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		08/22/23 10:08	08/25/23 04:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*94*		*70 - 130*	*08/22/23 10:08*	*08/25/23 04:32*	*1*
13C2 PFHxA	*114*		*70 - 130*	*08/22/23 10:08*	*08/25/23 04:32*	*1*
13C2 PFDA	*115*		*70 - 130*	*08/22/23 10:08*	*08/25/23 04:32*	*1*
13C3-GenX	*106*		*70 - 130*	*08/22/23 10:08*	*08/25/23 04:32*	*1*

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-59313-2

Date Collected: 08/14/23 10:32

Matrix: Drinking Water

Date Received: 08/16/23 10:10

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
2,4'-DDD	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
2,4'-DDE	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
2,4'-DDT	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
2,4-Dinitrotoluene	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
2,6-Dinitrotoluene	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
2-Methylnaphthalene	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
4,4'-DDD	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
4,4'-DDE	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
4,4'-DDT	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Acenaphthene	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Acenaphthylene	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Acetochlor	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Alachlor	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 18:08	1
alpha-BHC	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
alpha-Chlordane	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 18:08	1
Anthracene	<0.020		0.020		ug/L		08/17/23 12:00	08/20/23 18:08	1
Atrazine	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 18:08	1
Benz(a)anthracene	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 18:08	1
Benzo[a]pyrene	<0.020		0.020		ug/L		08/17/23 12:00	08/20/23 18:08	1
Benzo[b]fluoranthene	<0.020		0.020		ug/L		08/17/23 12:00	08/20/23 18:08	1
Benzo[g,h,i]perylene	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 18:08	1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Date Collected: 08/14/23 10:32
Date Received: 08/16/23 10:10

Lab Sample ID: 380-59313-2

Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	<0.020		0.020		ug/L		08/17/23 12:00	08/20/23 18:08	1
beta-BHC	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59		ug/L		08/17/23 12:00	08/20/23 18:08	1
Bromacil	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Butachlor	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 18:08	1
Butylbenzylphthalate	<0.49		0.49		ug/L		08/17/23 12:00	08/20/23 18:08	1
Chlorobenzilate	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Chloroneb	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Chlorpyrifos	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 18:08	1
Chrysene	<0.020		0.020		ug/L		08/17/23 12:00	08/20/23 18:08	1
delta-BHC	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Di(2-ethylhexyl)adipate	<0.59		0.59		ug/L		08/17/23 12:00	08/20/23 18:08	1
Dibenz(a,h)anthracene	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 18:08	1
Diclorvos (DDVP)	<0.049	^3+ *+	0.049		ug/L		08/17/23 12:00	08/20/23 18:08	1
Dieldrin	<0.20		0.20		ug/L		08/17/23 12:00	08/20/23 18:08	1
Diethylphthalate	<0.49		0.49		ug/L		08/17/23 12:00	08/20/23 18:08	1
Dimethylphthalate	<0.49		0.49		ug/L		08/17/23 12:00	08/20/23 18:08	1
Di-n-butyl phthalate	<0.99		0.99		ug/L		08/17/23 12:00	08/20/23 18:08	1
Di-n-octyl phthalate	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Endosulfan I (Alpha)	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Endosulfan II (Beta)	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Endosulfan sulfate	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Endrin	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Endrin aldehyde	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
EPTC	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Fluoranthene	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Fluorene	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 18:08	1
gamma-Chlordane	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 18:08	1
Heptachlor	<0.040		0.040		ug/L		08/17/23 12:00	08/20/23 18:08	1
Heptachlor epoxide (isomer B)	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 18:08	1
Hexachlorobenzene	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 18:08	1
Hexachlorocyclopentadiene	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 18:08	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 18:08	1
Isophorone	<0.49		0.49		ug/L		08/17/23 12:00	08/20/23 18:08	1
Lindane	<0.040		0.040		ug/L		08/17/23 12:00	08/20/23 18:08	1
Malathion	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Methoxychlor	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Metolachlor	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 18:08	1
Molinate	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Naphthalene	<0.30		0.30		ug/L		08/17/23 12:00	08/20/23 18:08	1
Parathion	<0.099	*+	0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Pendimethalin (Penoxaline)	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Phenanthrene	<0.040		0.040		ug/L		08/17/23 12:00	08/20/23 18:08	1
Propachlor	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 18:08	1
Pyrene	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 18:08	1
Simazine	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 18:08	1
Terbacil	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1
Terbuthylazine	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 18:08	1

Client Sample ID: AIEA GULCH WELLS PUMP 2
Date Collected: 08/14/23 10:32
Date Received: 08/16/23 10:10

Lab Sample ID: 380-59313-2
Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Thiobencarb	<0.20		0.20		ug/L		08/17/23 12:00	08/20/23 18:08	1
Total Permethrin (mixed isomers)	<0.20		0.20		ug/L		08/17/23 12:00	08/20/23 18:08	1
trans-Nonachlor	<0.049		0.049		ug/L		08/17/23 12:00	08/20/23 18:08	1
Trifluralin	<0.099		0.099		ug/L		08/17/23 12:00	08/20/23 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*	*08/17/23 12:00*	*08/20/23 18:08*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*96*		*70 - 130*	*08/17/23 12:00*	*08/20/23 18:08*	*1*
Perylene-d12	*89*		*70 - 130*	*08/17/23 12:00*	*08/20/23 18:08*	*1*
Triphenylphosphate	*123*		*70 - 130*	*08/17/23 12:00*	*08/20/23 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		08/30/23 14:48	09/01/23 19:23	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:23	1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Date Collected: 08/14/23 10:32
Date Received: 08/16/23 10:10

Lab Sample ID: 380-59313-2

Matrix: Drinking Water
PWSID Number: HI0000331

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*76*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:23*	*1*
13C6 PFDA	*94*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:23*	*1*
13C5 PFHxA	*95*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:23*	*1*
13C4 PFHpA	*94*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:23*	*1*
13C8 PFOA	*99*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:23*	*1*
13C9 PFNA	*102*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:23*	*1*
13C7 PFUnA	*99*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:23*	*1*
13C2 PFDoA	*101*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:23*	*1*
13C4 PFBA	*82*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:23*	*1*
13C5 PFPeA	*82*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:23*	*1*
13C3 PFBS	*104*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:23*	*1*
13C3 PFHxS	*101*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:23*	*1*
13C8 PFOS	*108*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:23*	*1*
13C2-4:2-FTS	*115*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:23*	*1*
13C2-6:2-FTS	*112*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:23*	*1*
13C2-8:2-FTS	*100*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:23*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 09:27	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 09:27	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 09:27	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 09:27	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 09:27	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 09:27	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 09:27	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 09:27	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 09:27	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 09:27	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 09:27	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 09:27	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 09:27	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 09:27	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 09:27	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 09:27	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 09:27	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 09:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*70*		*70 - 130*	*08/18/23 11:04*	*08/22/23 09:27*	*1*
13C2 PFHxA	*99*		*70 - 130*	*08/18/23 11:04*	*08/22/23 09:27*	*1*
13C2 PFDA	*100*		*70 - 130*	*08/18/23 11:04*	*08/22/23 09:27*	*1*
13C3-GenX	*90*		*70 - 130*	*08/18/23 11:04*	*08/22/23 09:27*	*1*

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

Job ID: 380-59313-1

Client Sample ID: FB: AIEA WELLS PUMPS 1&2 (260) P2
Date Collected: 08/14/23 11:14
Date Received: 08/16/23 10:10

Lab Sample ID: 380-59313-5
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		08/30/23 14:48	09/01/23 19:32	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:32	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*84*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:32*	*1*
13C6 PFDA	*96*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:32*	*1*
13C5 PFHxA	*100*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:32*	*1*
13C4 PFHpA	*99*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:32*	*1*
13C8 PFOA	*99*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:32*	*1*
13C9 PFNA	*99*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:32*	*1*
13C7 PFUnA	*95*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:32*	*1*
13C2 PFDoA	*97*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:32*	*1*
13C4 PFBA	*96*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:32*	*1*
13C5 PFPeA	*93*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:32*	*1*
13C3 PFBS	*100*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:32*	*1*
13C3 PFHxS	*98*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:32*	*1*
13C8 PFOS	*101*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:32*	*1*

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

Lab Sample ID: 380-59313-5

Date Collected: 08/14/23 11:14

Matrix: Water

Date Received: 08/16/23 10:10

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	*107*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:32*	*1*
13C2-6:2-FTS	*108*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:32*	*1*
13C2-8:2-FTS	*102*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:32*	*1*

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		08/18/23 11:04	08/22/23 05:50	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		08/18/23 11:04	08/22/23 05:50	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		08/18/23 11:04	08/22/23 05:50	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		08/18/23 11:04	08/22/23 05:50	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		08/18/23 11:04	08/22/23 05:50	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		08/18/23 11:04	08/22/23 05:50	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		08/18/23 11:04	08/22/23 05:50	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		08/18/23 11:04	08/22/23 05:50	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		08/18/23 11:04	08/22/23 05:50	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		08/18/23 11:04	08/22/23 05:50	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		08/18/23 11:04	08/22/23 05:50	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		08/18/23 11:04	08/22/23 05:50	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		08/18/23 11:04	08/22/23 05:50	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		08/18/23 11:04	08/22/23 05:50	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		08/18/23 11:04	08/22/23 05:50	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		08/18/23 11:04	08/22/23 05:50	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		08/18/23 11:04	08/22/23 05:50	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		08/18/23 11:04	08/22/23 05:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*87*		*70 - 130*	*08/18/23 11:04*	*08/22/23 05:50*	*1*
13C2 PFHxA	*107*		*70 - 130*	*08/18/23 11:04*	*08/22/23 05:50*	*1*
13C2 PFDA	*108*		*70 - 130*	*08/18/23 11:04*	*08/22/23 05:50*	*1*
13C3-GenX	*100*		*70 - 130*	*08/18/23 11:04*	*08/22/23 05:50*	*1*

Client Sample ID: FB: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-59313-6

Date Collected: 08/14/23 10:32

Matrix: Water

Date Received: 08/16/23 10:10

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		08/30/23 14:48	09/01/23 19:42	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		08/30/23 14:48	09/01/23 19:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		08/30/23 14:48	09/01/23 19:42	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		08/30/23 14:48	09/01/23 19:42	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		08/30/23 14:48	09/01/23 19:42	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		08/30/23 14:48	09/01/23 19:42	1

Client Sample ID: FB: AIEA GULCH WELLS PUMP 2
Date Collected: 08/14/23 10:32
Date Received: 08/16/23 10:10

Lab Sample ID: 380-59313-6
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		08/30/23 14:48	09/01/23 19:42	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:42	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:42	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:42	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:42	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:42	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:42	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:42	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:42	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:42	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:42	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:42	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:42	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:42	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:42	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:42	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:42	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:42	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		08/30/23 14:48	09/01/23 19:42	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*58*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:42*	*1*
13C6 PFDA	*91*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:42*	*1*
13C5 PFHxA	*73*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:42*	*1*
13C4 PFHpA	*74*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:42*	*1*
13C8 PFOA	*83*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:42*	*1*
13C9 PFNA	*89*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:42*	*1*
13C7 PFUnA	*96*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:42*	*1*
13C2 PFDoA	*99*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:42*	*1*
13C4 PFBA	*58*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:42*	*1*
13C5 PFPeA	*61*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:42*	*1*
13C3 PFBS	*100*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:42*	*1*
13C3 PFHxS	*99*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:42*	*1*
13C8 PFOS	*104*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:42*	*1*
13C2-4:2-FTS	*112*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:42*	*1*
13C2-6:2-FTS	*104*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:42*	*1*
13C2-8:2-FTS	*101*		*50 - 200*	*08/30/23 14:48*	*09/01/23 19:42*	*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		08/18/23 11:04	08/22/23 06:00	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 06:00	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 06:00	1

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

Job ID: 380-59313-1

Client Sample ID: FB: AIEA GULCH WELLS PUMP 2
Date Collected: 08/14/23 10:32
Date Received: 08/16/23 10:10

Lab Sample ID: 380-59313-6
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		08/18/23 11:04	08/22/23 06:00	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 06:00	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 06:00	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 06:00	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 06:00	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 06:00	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 06:00	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 06:00	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 06:00	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 06:00	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 06:00	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 06:00	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 06:00	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 06:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		08/18/23 11:04	08/22/23 06:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*89*		*70 - 130*	*08/18/23 11:04*	*08/22/23 06:00*	*1*
13C2 PFHxA	*103*		*70 - 130*	*08/18/23 11:04*	*08/22/23 06:00*	*1*
13C2 PFDA	*109*		*70 - 130*	*08/18/23 11:04*	*08/22/23 06:00*	*1*
13C3-GenX	*97*		*70 - 130*	*08/18/23 11:04*	*08/22/23 06:00*	*1*

Action Limit Summary

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

Job ID: 380-59313-1

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

Lab Sample ID: 380-59313-1

PWSID Number: HI0000331

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
Alachlor	<0.049		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: 380-59313-2

PWSID Number: HI0000331

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
Alachlor	<0.049		ug/L	2	0.049	525.2	Total/NA
Atrazine	<0.049		ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	<0.020		ug/L	0.2	0.020	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.59		ug/L	6	0.59	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.59		ug/L	400	0.59	525.2	Total/NA
Endrin	<0.099		ug/L	2	0.099	525.2	Total/NA
Heptachlor	<0.040		ug/L	0.4	0.040	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	<0.040		ug/L	0.2	0.040	525.2	Total/NA
Methoxychlor	<0.099		ug/L	40	0.099	525.2	Total/NA
Simazine	<0.049		ug/L	4	0.049	525.2	Total/NA

Surrogate Summary

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

Job ID: 380-59313-1

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)
380-59313-1	AIEA WELLS PUMPS 1&2 (260)	97	95	120
380-59313-2	AIEA GULCH WELLS PUMP 2	96	89	123

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)
380-59238-F-1-A MS	Matrix Spike	98	91	122
380-59242-F-1-A DU	Duplicate	98	86	113
LCS 380-52099/3-A	Lab Control Sample	97	94	122
LCSD 380-52099/4-A	Lab Control Sample Dup	97	91	120
MB 380-52099/1-A	Method Blank	98	89	122
MRL 380-52099/2-A	Lab Control Sample	97	88	118

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)
380-59313-1	AIEA WELLS PUMPS 1&2 (260)	94	114	115	106
380-59313-2	AIEA GULCH WELLS PUMP 2	70	99	100	90

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)
380-58484-A-1-A MS	Matrix Spike	96	115	112	109
380-58484-A-1-B MSD	Matrix Spike Duplicate	92	122	113	118
380-59313-5	FB: AIEA WELLS PUMPS 1&2 (260) P2	87	107	108	100
380-59313-6	FB: AIEA GULCH WELLS PUMP 2	89	103	109	97

Surrogate Summary

Client: City & County of Honolulu
Job ID: 380-59313-1
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)
380-59502-A-1-B MS	Matrix Spike	93	129	111	123
380-59502-A-1-C MSD	Matrix Spike Duplicate	99	127	119	120
LCS 380-52324/25-A	Lab Control Sample	100	124	110	111
LCS 380-52741/25-A	Lab Control Sample	97	112	109	97
LCSD 380-52324/26-A	Lab Control Sample Dup	92	111	110	104
LCSD 380-52741/26-A	Lab Control Sample Dup	98	127	114	123
MBL 380-52324/23-A	Method Blank	97	100	111	92
MBL 380-52741/23-A	Method Blank	95	97	118	86
MRL 380-52324/24-A	Lab Control Sample	101	109	110	101
MRL 380-52741/24-A	Lab Control Sample	103	123	122	103

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: 380-59313-1

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)
380-59313-1	AIEA WELLS PUMPS 1&2 (260)	94	95	103	99	100	98	96	99
380-59313-1 MS	AIEA WELLS PUMPS 1&2 (260) P2	59	79	59	60	67	77	85	87
380-59313-1 MSD	AIEA WELLS PUMPS 1&2 (260) P2	58	81	64	65	73	78	83	85
380-59313-2	AIEA GULCH WELLS PUMP 2	76	94	95	94	99	102	99	101

		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)
380-59313-1	AIEA WELLS PUMPS 1&2 (260)	100	97	100	95	100	108	107	106
380-59313-1 MS	AIEA WELLS PUMPS 1&2 (260) P2	59	59	94	96	100	105	109	104
380-59313-1 MSD	AIEA WELLS PUMPS 1&2 (260) P2	65	63	93	90	97	98	113	95
380-59313-2	AIEA GULCH WELLS PUMP 2	82	82	104	101	108	115	112	100

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)
380-59313-5	FB: AIEA WELLS PUMPS 1&2 (	84	96	100	99	99	99	95	97
380-59313-6	FB: AIEA GULCH WELLS PUMP 2	58	91	73	74	83	89	96	99
LCS 380-53809/23-A	Lab Control Sample	96	96	99	93	96	98	95	98
LCSD 380-53809/24-A	Lab Control Sample Dup	93	97	99	93	95	99	95	99
MBL 380-53809/21-A	Method Blank	82	89	95	94	92	91	89	88
MRL 380-53809/22-A	Lab Control Sample	83	89	100	96	94	90	90	90

		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)
380-59313-5	FB: AIEA WELLS PUMPS 1&2 (	96	93	100	98	101	107	108	102

Isotope Dilution Summary

Client: City & County of Honolulu
Job ID: 380-59313-1
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)
380-59313-6	FB: AIEA GULCH WELLS PUMI	58	61	100	99	104	112	104	101
LCS 380-53809/23-A	Lab Control Sample	94	97	92	89	94	95	95	91
LCSD 380-53809/24-A	Lab Control Sample Dup	89	88	91	88	93	90	92	89
MBL 380-53809/21-A	Method Blank	91	90	88	90	93	104	95	95
MRL 380-53809/22-A	Lab Control Sample	94	93	94	91	93	108	97	90

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 380-52099/1-A
Matrix: Water
Analysis Batch: 52500

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52099

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
2,4'-DDD	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
2,4'-DDE	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
2,4'-DDT	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
2,4-Dinitrotoluene	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
2,6-Dinitrotoluene	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
2-Methylnaphthalene	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
4,4'-DDD	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
4,4'-DDE	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
4,4'-DDT	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Acenaphthene	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Acenaphthylene	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Acetochlor	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Alachlor	<0.050		0.050		ug/L		08/17/23 09:30	08/20/23 13:28	1
alpha-BHC	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
alpha-Chlordane	<0.050		0.050		ug/L		08/17/23 09:30	08/20/23 13:28	1
Anthracene	<0.020		0.020		ug/L		08/17/23 09:30	08/20/23 13:28	1
Atrazine	<0.050		0.050		ug/L		08/17/23 09:30	08/20/23 13:28	1
Benz(a)anthracene	<0.050		0.050		ug/L		08/17/23 09:30	08/20/23 13:28	1
Benzo[a]pyrene	<0.020		0.020		ug/L		08/17/23 09:30	08/20/23 13:28	1
Benzo[b]fluoranthene	<0.020		0.020		ug/L		08/17/23 09:30	08/20/23 13:28	1
Benzo[g,h,i]perylene	<0.050		0.050		ug/L		08/17/23 09:30	08/20/23 13:28	1
Benzo[k]fluoranthene	<0.020		0.020		ug/L		08/17/23 09:30	08/20/23 13:28	1
beta-BHC	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Bis(2-ethylhexyl) phthalate	<0.60		0.60		ug/L		08/17/23 09:30	08/20/23 13:28	1
Bromacil	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Butachlor	<0.050		0.050		ug/L		08/17/23 09:30	08/20/23 13:28	1
Butylbenzylphthalate	<0.50		0.50		ug/L		08/17/23 09:30	08/20/23 13:28	1
Chlorobenzilate	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Chloroneb	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Chlorothalonil (Draconil, Bravo)	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Chlorpyrifos	<0.050		0.050		ug/L		08/17/23 09:30	08/20/23 13:28	1
Chrysene	<0.020		0.020		ug/L		08/17/23 09:30	08/20/23 13:28	1
delta-BHC	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Di(2-ethylhexyl)adipate	<0.60		0.60		ug/L		08/17/23 09:30	08/20/23 13:28	1
Dibenz(a,h)anthracene	<0.050		0.050		ug/L		08/17/23 09:30	08/20/23 13:28	1
Diclorvos (DDVP)	<0.050		0.050		ug/L		08/17/23 09:30	08/20/23 13:28	1
Dieldrin	<0.20		0.20		ug/L		08/17/23 09:30	08/20/23 13:28	1
Diethylphthalate	<0.50		0.50		ug/L		08/17/23 09:30	08/20/23 13:28	1
Dimethylphthalate	<0.50		0.50		ug/L		08/17/23 09:30	08/20/23 13:28	1
Di-n-butyl phthalate	<1.0		1.0		ug/L		08/17/23 09:30	08/20/23 13:28	1
Di-n-octyl phthalate	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Endosulfan I (Alpha)	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Endosulfan II (Beta)	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Endosulfan sulfate	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Endrin	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Endrin aldehyde	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
EPTC	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1

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

Lab Sample ID: MB 380-52099/1-A
Matrix: Water
Analysis Batch: 52500

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52099

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Fluorene	<0.050		0.050		ug/L		08/17/23 09:30	08/20/23 13:28	1
gamma-Chlordane	<0.050		0.050		ug/L		08/17/23 09:30	08/20/23 13:28	1
Heptachlor	<0.040		0.040		ug/L		08/17/23 09:30	08/20/23 13:28	1
Heptachlor epoxide (isomer B)	<0.050		0.050		ug/L		08/17/23 09:30	08/20/23 13:28	1
Hexachlorobenzene	<0.050		0.050		ug/L		08/17/23 09:30	08/20/23 13:28	1
Hexachlorocyclopentadiene	<0.050		0.050		ug/L		08/17/23 09:30	08/20/23 13:28	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050		ug/L		08/17/23 09:30	08/20/23 13:28	1
Isophorone	<0.50		0.50		ug/L		08/17/23 09:30	08/20/23 13:28	1
Lindane	<0.040		0.040		ug/L		08/17/23 09:30	08/20/23 13:28	1
Malathion	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Methoxychlor	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Metolachlor	<0.050		0.050		ug/L		08/17/23 09:30	08/20/23 13:28	1
Molinate	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Naphthalene	<0.30		0.30		ug/L		08/17/23 09:30	08/20/23 13:28	1
Parathion	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Pendimethalin (Penoxaline)	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Phenanthrene	<0.040		0.040		ug/L		08/17/23 09:30	08/20/23 13:28	1
Propachlor	<0.050		0.050		ug/L		08/17/23 09:30	08/20/23 13:28	1
Pyrene	<0.050		0.050		ug/L		08/17/23 09:30	08/20/23 13:28	1
Simazine	<0.050		0.050		ug/L		08/17/23 09:30	08/20/23 13:28	1
Terbacil	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Terbuthylazine	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1
Thiobencarb	<0.20		0.20		ug/L		08/17/23 09:30	08/20/23 13:28	1
Total Permethrin (mixed isomers)	<0.20		0.20		ug/L		08/17/23 09:30	08/20/23 13:28	1
trans-Nonachlor	<0.050		0.050		ug/L		08/17/23 09:30	08/20/23 13:28	1
Trifluralin	<0.10		0.10		ug/L		08/17/23 09:30	08/20/23 13:28	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*0.505*	*T J*	*ug/L*		*3.26*	*N/A*	*08/17/23 09:30*	*08/20/23 13:28*	*1*
Phenol, 4-(1,1-dimethylpropyl)-	*0.807*	*T J N*	*ug/L*		*3.90*	*80-46-6*	*08/17/23 09:30*	*08/20/23 13:28*	*1*
Tetradecanoic acid	*1.31*	*T J N*	*ug/L*		*5.85*	*544-63-8*	*08/17/23 09:30*	*08/20/23 13:28*	*1*
Oleic Acid	*1.57*	*T J N*	*ug/L*		*6.47*	*112-80-1*	*08/17/23 09:30*	*08/20/23 13:28*	*1*
Octadecanoic acid	*1.24*	*T J N*	*ug/L*		*6.54*	*57-11-4*	*08/17/23 09:30*	*08/20/23 13:28*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*98*		*70 - 130*	*08/17/23 09:30*	*08/20/23 13:28*	*1*
Perylene-d12	*89*		*70 - 130*	*08/17/23 09:30*	*08/20/23 13:28*	*1*
Triphenylphosphate	*122*		*70 - 130*	*08/17/23 09:30*	*08/20/23 13:28*	*1*

Lab Sample ID: LCS 380-52099/3-A
Matrix: Water
Analysis Batch: 52500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52099

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	1.98	1.92		ug/L		97	70 - 130
2,4'-DDD	1.98	2.14		ug/L		108	70 - 130
2,4'-DDE	1.98	2.08		ug/L		105	70 - 130

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

Lab Sample ID: LCS 380-52099/3-A
Matrix: Water
Analysis Batch: 52500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52099

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDT	1.98	2.33		ug/L		118	70 - 130
2,4-Dinitrotoluene	1.98	2.11		ug/L		107	70 - 130
2,6-Dinitrotoluene	1.98	2.11		ug/L		106	70 - 130
2-Methylnaphthalene	1.98	1.92		ug/L		97	70 - 130
4,4'-DDD	1.98	2.15		ug/L		108	70 - 130
4,4'-DDE	1.98	2.10		ug/L		106	70 - 130
4,4'-DDT	1.98	2.38		ug/L		120	70 - 130
Acenaphthene	1.98	1.78		ug/L		90	70 - 130
Acenaphthylene	1.98	1.84		ug/L		93	70 - 130
Acetochlor	1.98	2.37		ug/L		120	70 - 130
Alachlor	1.98	2.16		ug/L		109	70 - 130
alpha-BHC	1.98	1.91		ug/L		96	70 - 130
alpha-Chlordane	1.98	2.14		ug/L		108	70 - 130
Anthracene	1.98	1.84		ug/L		93	70 - 130
Atrazine	1.98	2.28		ug/L		115	70 - 130
Benz(a)anthracene	1.98	2.20		ug/L		111	70 - 130
Benzo[a]pyrene	1.98	2.14		ug/L		108	70 - 130
Benzo[b]fluoranthene	1.98	2.18		ug/L		110	70 - 130
Benzo[g,h,i]perylene	1.98	2.17		ug/L		109	70 - 130
Benzo[k]fluoranthene	1.98	2.24		ug/L		113	70 - 130
beta-BHC	1.98	1.94		ug/L		98	70 - 130
Bis(2-ethylhexyl) phthalate	1.98	1.81		ug/L		91	70 - 130
Bromacil	1.98	2.31		ug/L		116	70 - 130
Butachlor	1.98	2.35		ug/L		118	70 - 130
Butylbenzylphthalate	1.98	2.00		ug/L		101	70 - 130
Chlorobenzilate	1.98	2.13		ug/L		107	70 - 130
Chloroneb	1.98	1.99		ug/L		100	70 - 130
Chlorothalonil (Draconil, Bravo)	1.98	2.07		ug/L		104	70 - 130
Chlorpyrifos	1.98	2.30		ug/L		116	70 - 130
Chrysene	1.98	2.00		ug/L		101	70 - 130
delta-BHC	1.98	1.87		ug/L		94	70 - 130
Di(2-ethylhexyl)adipate	1.98	2.09		ug/L		105	70 - 130
Dibenz(a,h)anthracene	1.98	2.27		ug/L		114	70 - 130
Diclorvos (DDVP)	1.98	2.63	*+	ug/L		133	70 - 130
Dieldrin	1.98	2.10		ug/L		106	70 - 130
Diethylphthalate	1.98	2.10		ug/L		106	70 - 130
Dimethylphthalate	1.98	2.11		ug/L		107	70 - 130
Di-n-butyl phthalate	3.96	4.14		ug/L		105	70 - 130
Di-n-octyl phthalate	1.98	1.85		ug/L		93	70 - 130
Endosulfan I (Alpha)	1.98	1.74		ug/L		88	70 - 130
Endosulfan II (Beta)	1.98	2.06		ug/L		104	70 - 130
Endosulfan sulfate	1.98	2.28		ug/L		115	70 - 130
Endrin	1.98	2.43		ug/L		123	70 - 130
Endrin aldehyde	1.98	2.10		ug/L		106	70 - 130
EPTC	1.98	2.03		ug/L		102	70 - 130
Fluoranthene	1.98	2.19		ug/L		111	70 - 130
Fluorene	1.98	2.07		ug/L		104	70 - 130
gamma-Chlordane	1.98	2.21		ug/L		112	70 - 130
Heptachlor	1.98	2.14		ug/L		108	70 - 130

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

Lab Sample ID: LCS 380-52099/3-A
Matrix: Water
Analysis Batch: 52500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52099

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Heptachlor epoxide (isomer B)	1.98	2.29		ug/L		115	70 - 130
Hexachlorobenzene	1.98	1.97		ug/L		100	70 - 130
Hexachlorocyclopentadiene	1.98	2.11		ug/L		106	70 - 130
Indeno[1,2,3-cd]pyrene	1.98	2.17		ug/L		110	70 - 130
Isophorone	1.98	2.05		ug/L		103	70 - 130
Lindane	1.98	1.93		ug/L		97	70 - 130
Malathion	1.98	2.25		ug/L		114	70 - 130
Methoxychlor	1.98	2.23		ug/L		113	70 - 130
Metolachlor	1.98	2.36		ug/L		119	70 - 130
Molinate	1.98	2.12		ug/L		107	70 - 130
Naphthalene	1.98	1.85		ug/L		93	70 - 130
Parathion	1.98	2.52		ug/L		127	70 - 130
Pendimethalin (Penoxaline)	1.98	2.41		ug/L		122	70 - 130
Phenanthrene	1.98	1.83		ug/L		92	70 - 130
Propachlor	1.98	2.21		ug/L		111	70 - 130
Pyrene	1.98	2.21		ug/L		112	70 - 130
Simazine	1.98	2.26		ug/L		114	70 - 130
Terbacil	1.98	2.28		ug/L		115	70 - 130
Terbuthylazine	1.98	2.41		ug/L		122	70 - 130
Thiobencarb	1.98	2.18		ug/L		110	70 - 130
trans-Nonachlor	1.98	2.37		ug/L		120	70 - 130
Trifluralin	1.98	2.22		ug/L		112	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Nitro-m-xylene	*97*		*70 - 130*
Perylene-d12	*94*		*70 - 130*
Triphenylphosphate	*122*		*70 - 130*

Lab Sample ID: LCSD 380-52099/4-A
Matrix: Water
Analysis Batch: 52500

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 52099

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	1.98	1.97		ug/L		99	70 - 130	3	20
2,4'-DDD	1.98	2.25		ug/L		113	70 - 130	5	20
2,4'-DDE	1.98	2.21		ug/L		111	70 - 130	6	20
2,4'-DDT	1.98	2.47		ug/L		124	70 - 130	6	20
2,4-Dinitrotoluene	1.98	2.26		ug/L		114	70 - 130	7	20
2,6-Dinitrotoluene	1.98	2.23		ug/L		112	70 - 130	6	20
2-Methylnaphthalene	1.98	1.98		ug/L		100	70 - 130	3	20
4,4'-DDD	1.98	2.27		ug/L		114	70 - 130	6	20
4,4'-DDE	1.98	2.26		ug/L		114	70 - 130	7	20
4,4'-DDT	1.98	2.53		ug/L		127	70 - 130	6	20
Acenaphthene	1.98	1.87		ug/L		94	70 - 130	5	20
Acenaphthylene	1.98	1.92		ug/L		97	70 - 130	4	20
Acetochlor	1.98	2.39		ug/L		121	70 - 130	1	20
Alachlor	1.98	2.19		ug/L		111	70 - 130	2	20
alpha-BHC	1.98	1.99		ug/L		100	70 - 130	4	20

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

Lab Sample ID: LCSD 380-52099/4-A
Matrix: Water
Analysis Batch: 52500

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 52099

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
alpha-Chlordane			1.98	2.33		ug/L		118	70 - 130	9	20
Anthracene			1.98	1.91		ug/L		96	70 - 130	4	20
Atrazine			1.98	2.39		ug/L		120	70 - 130	5	20
Benz(a)anthracene			1.98	2.31		ug/L		116	70 - 130	5	20
Benzo[a]pyrene			1.98	2.11		ug/L		107	70 - 130	1	20
Benzo[b]fluoranthene			1.98	2.25		ug/L		113	70 - 130	3	20
Benzo[g,h,i]perylene			1.98	2.17		ug/L		110	70 - 130	0	20
Benzo[k]fluoranthene			1.98	2.21		ug/L		112	70 - 130	1	20
beta-BHC			1.98	2.03		ug/L		103	70 - 130	5	20
Bis(2-ethylhexyl) phthalate			1.98	1.82		ug/L		92	70 - 130	1	20
Bromacil			1.98	2.43		ug/L		123	70 - 130	5	20
Butachlor			1.98	2.43		ug/L		123	70 - 130	4	20
Butylbenzylphthalate			1.98	2.09		ug/L		105	70 - 130	4	20
Chlorobenzilate			1.98	2.19		ug/L		110	70 - 130	3	20
Chloroneb			1.98	2.04		ug/L		103	70 - 130	2	20
Chlorothalonil (Draconil, Bravo)			1.98	2.15		ug/L		108	70 - 130	4	20
Chlorpyrifos			1.98	2.40		ug/L		121	70 - 130	4	20
Chrysene			1.98	2.07		ug/L		104	70 - 130	4	20
delta-BHC			1.98	1.88		ug/L		95	70 - 130	1	20
Di(2-ethylhexyl)adipate			1.98	2.31		ug/L		117	70 - 130	10	20
Dibenz(a,h)anthracene			1.98	2.22		ug/L		112	70 - 130	2	20
Diclorvos (DDVP)			1.98	2.76	*+	ug/L		139	70 - 130	5	20
Dieldrin			1.98	2.21		ug/L		111	70 - 130	5	20
Diethylphthalate			1.98	2.16		ug/L		109	70 - 130	3	20
Dimethylphthalate			1.98	2.18		ug/L		110	70 - 130	3	20
Di-n-butyl phthalate			3.97	4.26		ug/L		107	70 - 130	3	20
Di-n-octyl phthalate			1.98	1.87		ug/L		94	70 - 130	1	20
Endosulfan I (Alpha)			1.98	1.79		ug/L		90	70 - 130	3	20
Endosulfan II (Beta)			1.98	2.11		ug/L		106	70 - 130	2	20
Endosulfan sulfate			1.98	2.30		ug/L		116	70 - 130	1	20
Endrin			1.98	2.43		ug/L		123	70 - 130	0	20
Endrin aldehyde			1.98	2.14		ug/L		108	70 - 130	2	20
EPTC			1.98	2.10		ug/L		106	70 - 130	3	20
Fluoranthene			1.98	2.31		ug/L		117	70 - 130	5	20
Fluorene			1.98	2.17		ug/L		109	70 - 130	5	20
gamma-Chlordane			1.98	2.44		ug/L		123	70 - 130	10	20
Heptachlor			1.98	2.21		ug/L		111	70 - 130	3	20
Heptachlor epoxide (isomer B)			1.98	2.40		ug/L		121	70 - 130	5	20
Hexachlorobenzene			1.98	2.18		ug/L		110	70 - 130	10	20
Hexachlorocyclopentadiene			1.98	2.25		ug/L		113	70 - 130	7	20
Indeno[1,2,3-cd]pyrene			1.98	2.18		ug/L		110	70 - 130	0	20
Isophorone			1.98	2.15		ug/L		108	70 - 130	5	20
Lindane			1.98	1.96		ug/L		99	70 - 130	2	20
Malathion			1.98	2.24		ug/L		113	70 - 130	1	20
Methoxychlor			1.98	2.30		ug/L		116	70 - 130	3	20
Metolachlor			1.98	2.35		ug/L		119	70 - 130	0	20
Molinate			1.98	2.21		ug/L		112	70 - 130	4	20
Naphthalene			1.98	1.91		ug/L		96	70 - 130	3	20
Parathion			1.98	2.60	*+	ug/L		131	70 - 130	3	20

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

Lab Sample ID: LCSD 380-52099/4-A
Matrix: Water
Analysis Batch: 52500

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 52099

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Pendimethalin (Penoxaline)			1.98	2.55		ug/L		129	70 - 130	6	20
Phenanthrene			1.98	1.91		ug/L		97	70 - 130	4	20
Propachlor			1.98	2.29		ug/L		116	70 - 130	4	20
Pyrene			1.98	2.32		ug/L		117	70 - 130	5	20
Simazine			1.98	2.42		ug/L		122	70 - 130	7	20
Terbacil			1.98	2.45		ug/L		124	70 - 130	7	20
Terbuthylazine			1.98	2.50		ug/L		126	70 - 130	4	20
Thiobencarb			1.98	2.23		ug/L		112	70 - 130	2	20
trans-Nonachlor			1.98	2.51		ug/L		127	70 - 130	6	20
Trifluralin			1.98	2.36		ug/L		119	70 - 130	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Nitro-m-xylene	*97*		*70 - 130*
Perylene-d12	*91*		*70 - 130*
Triphenylphosphate	*120*		*70 - 130*

Lab Sample ID: MRL 380-52099/2-A
Matrix: Water
Analysis Batch: 52500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52099

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
1-Methylnaphthalene			0.0992	0.107		ug/L		108	50 - 150		
2,4'-DDD			0.0992	0.127		ug/L		128	50 - 150		
2,4'-DDE			0.0992	0.111		ug/L		112	50 - 150		
2,4'-DDT			0.0992	0.127		ug/L		128	50 - 150		
2,4-Dinitrotoluene			0.0992	0.121		ug/L		122	50 - 150		
2,6-Dinitrotoluene			0.0992	0.111		ug/L		112	50 - 150		
2-Methylnaphthalene			0.0992	0.105		ug/L		106	50 - 150		
4,4'-DDD			0.0992	0.116		ug/L		117	50 - 150		
4,4'-DDE			0.0992	0.110		ug/L		111	50 - 150		
4,4'-DDT			0.0992	0.139		ug/L		140	50 - 150		
Acenaphthene			0.0992	0.0922	J	ug/L		93	50 - 150		
Acenaphthylene			0.0992	0.0877	J	ug/L		88	50 - 150		
Acetochlor			0.0496	0.0512	J	ug/L		103	50 - 150		
Alachlor			0.0496	0.0549		ug/L		111	50 - 150		
alpha-BHC			0.0992	0.0947	J	ug/L		95	50 - 150		
alpha-Chlordane			0.0248	<0.029		ug/L		98	50 - 150		
Anthracene			0.0198	<0.019		ug/L		93	50 - 150		
Atrazine			0.0496	0.0699		ug/L		141	50 - 150		
Benz(a)anthracene			0.0496	0.0486	J	ug/L		98	50 - 150		
Benzo[a]pyrene			0.0198	0.0190	J	ug/L		96	50 - 150		
Benzo[b]fluoranthene			0.0198	0.0200		ug/L		101	50 - 150		
Benzo[g,h,i]perylene			0.0496	0.0440	J	ug/L		89	50 - 150		
Benzo[k]fluoranthene			0.0198	0.0207		ug/L		104	50 - 150		
beta-BHC			0.0992	0.0939	J	ug/L		95	50 - 150		
Bis(2-ethylhexyl) phthalate			0.595	0.598	J	ug/L		100	50 - 150		
Bromacil			0.0992	0.142		ug/L		144	50 - 150		
Butachlor			0.0496	0.0571		ug/L		115	50 - 150		

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

Lab Sample ID: MRL 380-52099/2-A
Matrix: Water
Analysis Batch: 52500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52099

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Butylbenzylphthalate	0.149	0.195	J	ug/L		131	50 - 150
Chlorobenzilate	0.0992	0.141		ug/L		143	50 - 150
Chloroneb	0.0992	0.0972	J	ug/L		98	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0992	0.132		ug/L		133	50 - 150
Chlorpyrifos	0.0496	0.0525		ug/L		106	50 - 150
Chrysene	0.0198	0.0203		ug/L		102	50 - 150
delta-BHC	0.0992	0.103		ug/L		103	50 - 150
Di(2-ethylhexyl)adipate	0.298	0.374	J	ug/L		126	50 - 150
Dibenz(a,h)anthracene	0.0496	0.0456	J	ug/L		92	50 - 150
Diclorvos (DDVP)	0.0496	0.0839	^3+	ug/L		169	50 - 150
Dieldrin	0.0992	0.106	J	ug/L		107	50 - 150
Diethylphthalate	0.149	0.175	J	ug/L		117	50 - 150
Dimethylphthalate	0.298	0.299	J	ug/L		101	50 - 150
Di-n-butyl phthalate	0.298	0.353	J	ug/L		119	49 - 243
Di-n-octyl phthalate	0.0992	0.119		ug/L		120	50 - 150
Endosulfan I (Alpha)	0.0992	0.0813	J	ug/L		82	50 - 150
Endosulfan II (Beta)	0.0992	0.0960	J	ug/L		97	50 - 150
Endosulfan sulfate	0.0992	0.123		ug/L		124	50 - 150
Endrin	0.0992	0.128		ug/L		129	50 - 150
Endrin aldehyde	0.0992	0.149		ug/L		150	50 - 150
EPTC	0.0992	0.101		ug/L		102	50 - 150
Fluoranthene	0.0496	0.0540	J	ug/L		109	50 - 150
Fluorene	0.0496	0.0587		ug/L		118	50 - 150
gamma-Chlordane	0.0248	0.0252	J	ug/L		101	50 - 150
Heptachlor	0.0397	0.0534		ug/L		135	50 - 150
Heptachlor epoxide (isomer B)	0.0496	0.0526		ug/L		106	50 - 150
Hexachlorobenzene	0.0496	0.0488	J	ug/L		98	50 - 150
Hexachlorocyclopentadiene	0.0496	0.0496	J	ug/L		100	50 - 150
Indeno[1,2,3-cd]pyrene	0.0496	0.0431	J	ug/L		87	50 - 150
Isophorone	0.0992	0.114	J	ug/L		115	50 - 150
Lindane	0.0397	0.0355	J	ug/L		89	50 - 150
Malathion	0.0992	0.120		ug/L		121	50 - 150
Methoxychlor	0.0992	0.138		ug/L		139	50 - 150
Metolachlor	0.0496	0.0605		ug/L		122	50 - 150
Molinate	0.0992	0.105		ug/L		106	50 - 150
Naphthalene	0.0992	0.106	J	ug/L		107	50 - 150
Parathion	0.0992	0.135		ug/L		136	50 - 150
Pendimethalin (Penoxaline)	0.0992	0.127		ug/L		128	50 - 150
Phenanthrene	0.0198	0.0217	J	ug/L		109	50 - 150
Propachlor	0.0496	0.0553		ug/L		112	50 - 150
Pyrene	0.0496	0.0529		ug/L		107	50 - 150
Simazine	0.0496	0.0665		ug/L		134	50 - 150
Terbacil	0.0992	0.141		ug/L		142	50 - 150
Terbuthylazine	0.0992	0.113		ug/L		114	50 - 150
Thiobencarb	0.0992	0.120	J	ug/L		121	50 - 150
trans-Nonachlor	0.0248	<0.026		ug/L		102	50 - 150
Trifluralin	0.0992	0.119		ug/L		120	50 - 150

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

Lab Sample ID: MRL 380-52099/2-A
Matrix: Water
Analysis Batch: 52500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52099

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	97		70 - 130
Perylene-d12	88		70 - 130
Triphenylphosphate	118		70 - 130

Lab Sample ID: 380-59238-F-1-A MS
Matrix: Water
Analysis Batch: 52500

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52099

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.097		1.94	1.92		ug/L		99	70 - 130
2,4'-DDD	<0.097		1.94	2.12		ug/L		109	70 - 130
2,4'-DDE	<0.097		1.94	2.02		ug/L		104	70 - 130
2,4'-DDT	<0.097		1.94	2.24		ug/L		116	70 - 130
2,4-Dinitrotoluene	<0.097		1.94	2.25		ug/L		116	70 - 130
2,6-Dinitrotoluene	<0.097		1.94	2.21		ug/L		114	70 - 130
2-Methylnaphthalene	<0.097		1.94	1.93		ug/L		100	70 - 130
4,4'-DDD	<0.097		1.94	2.12		ug/L		109	70 - 130
4,4'-DDE	<0.097		1.94	2.02		ug/L		104	70 - 130
4,4'-DDT	<0.097		1.94	2.27		ug/L		117	70 - 130
Acenaphthene	<0.097		1.94	1.79		ug/L		92	70 - 130
Acenaphthylene	<0.097		1.94	1.84		ug/L		95	70 - 130
Acetochlor	<0.097		1.94	2.37		ug/L		122	70 - 130
Alachlor	<0.049		1.94	2.18		ug/L		112	70 - 130
alpha-BHC	<0.097		1.94	1.90		ug/L		98	70 - 130
alpha-Chlordane	<0.049		1.94	2.23		ug/L		115	70 - 130
Anthracene	<0.019	F1	1.94	0.803	F1	ug/L		41	70 - 130
Atrazine	<0.049		1.94	2.24		ug/L		115	70 - 130
Benz(a)anthracene	<0.049		1.94	1.90		ug/L		98	70 - 130
Benzo[a]pyrene	<0.019		1.94	1.50		ug/L		77	70 - 130
Benzo[b]fluoranthene	<0.019		1.94	2.13		ug/L		110	70 - 130
Benzo[g,h,i]perylene	<0.049		1.94	2.06		ug/L		106	70 - 130
Benzo[k]fluoranthene	<0.019		1.94	2.11		ug/L		109	70 - 130
beta-BHC	<0.097		1.94	1.90		ug/L		98	70 - 130
Bis(2-ethylhexyl) phthalate	<0.58		1.94	1.63		ug/L		84	70 - 130
Bromacil	<0.097		1.94	2.40		ug/L		124	70 - 130
Butachlor	<0.049		1.94	2.33		ug/L		120	70 - 130
Butylbenzylphthalate	<0.49		1.94	2.01		ug/L		104	70 - 130
Chlorobenzilate	<0.097		1.94	2.14		ug/L		110	70 - 130
Chloroneb	<0.097		1.94	1.95		ug/L		101	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.097		1.94	2.04		ug/L		105	70 - 130
Chlorpyrifos	<0.049		1.94	2.31		ug/L		119	70 - 130
Chrysene	<0.019		1.94	1.92		ug/L		99	70 - 130
delta-BHC	<0.097		1.94	1.83		ug/L		94	70 - 130
Di(2-ethylhexyl)adipate	<0.58	F1	1.94	3.00	F1	ug/L		149	70 - 130
Dibenz(a,h)anthracene	<0.049		1.94	2.13		ug/L		110	70 - 130
Diclorvos (DDVP)	<0.049	F1 ^3+ *+	1.94	2.63	F1	ug/L		136	70 - 130
Dieldrin	<0.19		1.94	2.11		ug/L		109	70 - 130
Diethylphthalate	<0.49		1.94	2.08		ug/L		107	70 - 130

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

Lab Sample ID: 380-59238-F-1-A MS
Matrix: Water
Analysis Batch: 52500

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52099

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Dimethylphthalate	<0.49		1.94	2.08		ug/L		107	70 - 130
Di-n-butyl phthalate	<0.97		3.88	4.17		ug/L		108	70 - 130
Di-n-octyl phthalate	<0.097		1.94	1.62		ug/L		84	70 - 130
Endosulfan I (Alpha)	<0.097		1.94	1.74		ug/L		90	70 - 130
Endosulfan II (Beta)	<0.097		1.94	2.02		ug/L		104	70 - 130
Endosulfan sulfate	<0.097		1.94	2.23		ug/L		115	70 - 130
Endrin	<0.097		1.94	2.24		ug/L		116	70 - 130
Endrin aldehyde	<0.097		1.94	1.98		ug/L		102	70 - 130
EPTC	<0.097		1.94	2.15		ug/L		111	70 - 130
Fluoranthene	<0.097		1.94	2.22		ug/L		115	70 - 130
Fluorene	<0.049		1.94	2.08		ug/L		107	70 - 130
gamma-Chlordane	<0.049		1.94	2.27		ug/L		117	70 - 130
Heptachlor	<0.039		1.94	2.15		ug/L		111	70 - 130
Heptachlor epoxide (isomer B)	<0.049		1.94	2.32		ug/L		120	70 - 130
Hexachlorobenzene	<0.049		1.94	2.05		ug/L		106	70 - 130
Hexachlorocyclopentadiene	<0.049		1.94	2.32		ug/L		120	70 - 130
Indeno[1,2,3-cd]pyrene	<0.049		1.94	2.07		ug/L		107	70 - 130
Isophorone	<0.49		1.94	2.11		ug/L		109	70 - 130
Lindane	<0.039		1.94	1.90		ug/L		98	70 - 130
Malathion	<0.097		1.94	2.25		ug/L		116	70 - 130
Methoxychlor	<0.097		1.94	2.25		ug/L		116	70 - 130
Metolachlor	<0.049		1.94	2.28		ug/L		118	70 - 130
Molinate	<0.097		1.94	2.30		ug/L		119	70 - 130
Naphthalene	<0.29		1.94	1.84		ug/L		95	70 - 130
Parathion	<0.097	F1 *+	1.94	2.53	F1	ug/L		131	70 - 130
Pendimethalin (Penoxaline)	<0.097		1.94	2.48		ug/L		128	70 - 130
Phenanthrene	<0.039		1.94	1.87		ug/L		97	70 - 130
Propachlor	<0.049		1.94	2.18		ug/L		113	70 - 130
Pyrene	<0.049		1.94	2.18		ug/L		113	70 - 130
Simazine	<0.049		1.94	2.25		ug/L		116	70 - 130
Terbacil	<0.097		1.94	2.28		ug/L		118	70 - 130
Terbuthylazine	<0.097		1.94	2.38		ug/L		123	70 - 130
Thiobencarb	<0.19		1.94	2.22		ug/L		115	70 - 130
trans-Nonachlor	<0.049		1.94	2.34		ug/L		121	70 - 130
Trifluralin	<0.097		1.94	2.29		ug/L		118	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Nitro-m-xylene	*98*		*70 - 130*
Perylene-d12	*91*		*70 - 130*
Triphenylphosphate	*122*		*70 - 130*

Lab Sample ID: 380-59242-F-1-A DU
Matrix: Water
Analysis Batch: 52500

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 52099

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: 380-59242-F-1-A DU
Matrix: Water
Analysis Batch: 52500

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 52099

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			<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			<0.097		ug/L				NC	20
Butachlor	<0.049			<0.048		ug/L				NC	20
Butylbenzylphthalate	<0.49			<0.48		ug/L				NC	20
Chlorobenzilate	<0.097			<0.097		ug/L				NC	20
Chloroneb	<0.097			<0.097		ug/L				NC	20
Chlorothalonil (Draconil, Bravo)	<0.097			<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	^3+ *+		<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: 380-59242-F-1-A DU
Matrix: Water
Analysis Batch: 52500

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 52099

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	*+		<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			<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	*98*		*70 - 130*
Perylene-d12	*86*		*70 - 130*
Triphenylphosphate	*113*		*70 - 130*

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

Lab Sample ID: MBL 380-53809/21-A
Matrix: Water
Analysis Batch: 54177

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53809

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		08/30/23 14:48	09/01/23 17:47	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1

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

Lab Sample ID: MBL 380-53809/21-A
Matrix: Water
Analysis Batch: 54177

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53809

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0		ng/L		08/30/23 14:48	09/01/23 17:47	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*82*		*50 - 200*	*08/30/23 14:48*	*09/01/23 17:47*	*1*
13C6 PFDA	*89*		*50 - 200*	*08/30/23 14:48*	*09/01/23 17:47*	*1*
13C5 PFHxA	*95*		*50 - 200*	*08/30/23 14:48*	*09/01/23 17:47*	*1*
13C4 PFHpA	*94*		*50 - 200*	*08/30/23 14:48*	*09/01/23 17:47*	*1*
13C8 PFOA	*92*		*50 - 200*	*08/30/23 14:48*	*09/01/23 17:47*	*1*
13C9 PFNA	*91*		*50 - 200*	*08/30/23 14:48*	*09/01/23 17:47*	*1*
13C7 PFUnA	*89*		*50 - 200*	*08/30/23 14:48*	*09/01/23 17:47*	*1*
13C2 PFDoA	*88*		*50 - 200*	*08/30/23 14:48*	*09/01/23 17:47*	*1*
13C4 PFBA	*91*		*50 - 200*	*08/30/23 14:48*	*09/01/23 17:47*	*1*
13C5 PFPeA	*90*		*50 - 200*	*08/30/23 14:48*	*09/01/23 17:47*	*1*
13C3 PFBS	*88*		*50 - 200*	*08/30/23 14:48*	*09/01/23 17:47*	*1*
13C3 PFHxS	*90*		*50 - 200*	*08/30/23 14:48*	*09/01/23 17:47*	*1*
13C8 PFOS	*93*		*50 - 200*	*08/30/23 14:48*	*09/01/23 17:47*	*1*
13C2-4:2-FTS	*104*		*50 - 200*	*08/30/23 14:48*	*09/01/23 17:47*	*1*
13C2-6:2-FTS	*95*		*50 - 200*	*08/30/23 14:48*	*09/01/23 17:47*	*1*
13C2-8:2-FTS	*95*		*50 - 200*	*08/30/23 14:48*	*09/01/23 17:47*	*1*

Lab Sample ID: LCS 380-53809/23-A
Matrix: Water
Analysis Batch: 54177

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53809

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			120	112		ng/L		93	70 - 130		

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

Lab Sample ID: LCS 380-53809/23-A
Matrix: Water
Analysis Batch: 54177

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53809

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	116		ng/L		97	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	117		ng/L		97	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	115		ng/L		95	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	119		ng/L		99	70 - 130
Perfluorodecanoic acid (PFDA)	120	118		ng/L		98	70 - 130
Perfluorododecanoic acid (PFDoA)	120	119		ng/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	113		ng/L		94	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	123		ng/L		103	70 - 130
Perfluorohexanoic acid (PFHxA)	120	116		ng/L		96	70 - 130
Perfluorononanoic acid (PFNA)	120	117		ng/L		98	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	117		ng/L		98	70 - 130
Perfluorooctanoic acid (PFOA)	120	115		ng/L		96	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	119		ng/L		99	70 - 130
Perfluorobutanoic acid (PFBA)	120	116		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	119		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	114		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	116		ng/L		97	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	116		ng/L		97	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	116		ng/L		97	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	119		ng/L		99	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	119		ng/L		99	70 - 130
Perfluoropentanoic acid (PFPeA)	120	117		ng/L		97	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	114		ng/L		95	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	120	129		ng/L		108	70 - 130

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*96*		*50 - 200*
13C6 PFDA	*96*		*50 - 200*
13C5 PFHxA	*99*		*50 - 200*
13C4 PFHpA	*93*		*50 - 200*
13C8 PFOA	*96*		*50 - 200*
13C9 PFNA	*98*		*50 - 200*
13C7 PFUnA	*95*		*50 - 200*
13C2 PFDoA	*98*		*50 - 200*
13C4 PFBA	*94*		*50 - 200*

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

Lab Sample ID: LCS 380-53809/23-A
Matrix: Water
Analysis Batch: 54177

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53809

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C5 PFPeA	*97*		*50 - 200*
13C3 PFBS	*92*		*50 - 200*
13C3 PFHxS	*89*		*50 - 200*
13C8 PFOS	*94*		*50 - 200*
13C2-4:2-FTS	*95*		*50 - 200*
13C2-6:2-FTS	*95*		*50 - 200*
13C2-8:2-FTS	*91*		*50 - 200*

Lab Sample ID: LCSD 380-53809/24-A
Matrix: Water
Analysis Batch: 54177

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53809

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			120	115		ng/L		96	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			120	115		ng/L		96	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			120	120		ng/L		100	70 - 130	3	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			120	123		ng/L		103	70 - 130	7	30
Perfluorobutanesulfonic acid (PFBS)			120	117		ng/L		98	70 - 130	2	30
Perfluorodecanoic acid (PFDA)			120	119		ng/L		99	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)			120	120		ng/L		100	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)			120	118		ng/L		98	70 - 130	5	30
Perfluorohexanesulfonic acid (PFHxS)			120	121		ng/L		101	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)			120	113		ng/L		94	70 - 130	2	30
Perfluorononanoic acid (PFNA)			120	122		ng/L		101	70 - 130	4	30
Perfluorooctanesulfonic acid (PFOS)			120	120		ng/L		100	70 - 130	2	30
Perfluorooctanoic acid (PFOA)			120	119		ng/L		99	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)			120	122		ng/L		102	70 - 130	3	30
Perfluorobutanoic acid (PFBA)			120	119		ng/L		99	70 - 130	3	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)			120	122		ng/L		101	70 - 130	2	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)			120	117		ng/L		98	70 - 130	3	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)			120	111		ng/L		93	70 - 130	4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)			120	127		ng/L		106	70 - 130	9	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)			120	118		ng/L		98	70 - 130	1	30
Perfluoro-3-methoxypropanoic acid (PFMPA)			120	119		ng/L		99	70 - 130	0	30
Perfluoro-4-methoxybutanoic acid (PFMBA)			120	121		ng/L		100	70 - 130	1	30

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

Lab Sample ID: LCSD 380-53809/24-A
Matrix: Water
Analysis Batch: 54177

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53809

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoropentanoic acid (PFPeA)			120	124		ng/L		104	70 - 130	6	30
Perfluoroheptanesulfonic acid (PFHpS)			120	115		ng/L		95	70 - 130	0	30
Perfluoropentanesulfonic acid (PFPeS)			120	125		ng/L		104	70 - 130	3	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C3 HFPO-DA	*93*		*50 - 200*
13C6 PFDA	*97*		*50 - 200*
13C5 PFHxA	*99*		*50 - 200*
13C4 PFHpA	*93*		*50 - 200*
13C8 PFOA	*95*		*50 - 200*
13C9 PFNA	*99*		*50 - 200*
13C7 PFUnA	*95*		*50 - 200*
13C2 PFDoA	*99*		*50 - 200*
13C4 PFBA	*89*		*50 - 200*
13C5 PFPeA	*88*		*50 - 200*
13C3 PFBS	*91*		*50 - 200*
13C3 PFHxS	*88*		*50 - 200*
13C8 PFOS	*93*		*50 - 200*
13C2-4:2-FTS	*90*		*50 - 200*
13C2-6:2-FTS	*92*		*50 - 200*
13C2-8:2-FTS	*89*		*50 - 200*

Lab Sample ID: MRL 380-53809/22-A
Matrix: Water
Analysis Batch: 54177

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53809

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			2.00	2.17	J	ng/L		108	50 - 150		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			2.00	2.33	J	ng/L		116	50 - 150		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			2.00	2.10	J	ng/L		105	50 - 150		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			2.00	2.16	J	ng/L		108	50 - 150		
Perfluorobutanesulfonic acid (PFBS)			2.00	2.26	J	ng/L		113	50 - 150		
Perfluorodecanoic acid (PFDA)			2.00	2.19	J	ng/L		109	50 - 150		
Perfluorododecanoic acid (PFDoA)			2.00	2.19	J	ng/L		109	50 - 150		
Perfluoroheptanoic acid (PFHpA)			2.00	2.13	J	ng/L		106	50 - 150		
Perfluorohexanesulfonic acid (PFHxS)			2.00	2.20	J	ng/L		110	50 - 150		
Perfluorohexanoic acid (PFHxA)			2.00	2.03	J	ng/L		101	50 - 150		
Perfluorononanoic acid (PFNA)			2.00	2.21	J	ng/L		110	50 - 150		
Perfluorooctanesulfonic acid (PFOS)			2.00	2.23	J	ng/L		111	50 - 150		
Perfluorooctanoic acid (PFOA)			2.00	2.39	J	ng/L		119	50 - 150		

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

Lab Sample ID: MRL 380-53809/22-A
Matrix: Water
Analysis Batch: 54177

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53809

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.35	J	ng/L		117	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	2.32	J	ng/L		116	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	2.29	J	ng/L		114	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.30	J	ng/L		115	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.00	2.24	J	ng/L		112	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.00	2.34	J	ng/L		117	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.12	J	ng/L		106	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	2.10	J	ng/L		105	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	2.41	J	ng/L		120	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	2.20	J	ng/L		110	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	2.21	J	ng/L		110	50 - 150

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C3 HFPO-DA	*83*		*50 - 200*
13C6 PFDA	*89*		*50 - 200*
13C5 PFHxA	*100*		*50 - 200*
13C4 PFHpA	*96*		*50 - 200*
13C8 PFOA	*94*		*50 - 200*
13C9 PFNA	*90*		*50 - 200*
13C7 PFUnA	*90*		*50 - 200*
13C2 PFDoA	*90*		*50 - 200*
13C4 PFBA	*94*		*50 - 200*
13C5 PFPeA	*93*		*50 - 200*
13C3 PFBS	*94*		*50 - 200*
13C3 PFHxS	*91*		*50 - 200*
13C8 PFOS	*93*		*50 - 200*
13C2-4:2-FTS	*108*		*50 - 200*
13C2-6:2-FTS	*97*		*50 - 200*
13C2-8:2-FTS	*90*		*50 - 200*

Lab Sample ID: 380-59313-1 MS
Matrix: Drinking Water
Analysis Batch: 54177

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
Prep Type: Total/NA
Prep Batch: 53809

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		120	108		ng/L		90	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		120	111		ng/L		93	70 - 130

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

Lab Sample ID: 380-59313-1 MS
Matrix: Drinking Water
Analysis Batch: 54177

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
Prep Type: Total/NA
Prep Batch: 53809

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	101		ng/L		84	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		120	111		ng/L		93	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		120	119		ng/L		98	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		120	119		ng/L		99	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		120	118		ng/L		98	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		120	112		ng/L		93	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		120	115		ng/L		95	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		120	116		ng/L		96	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		120	112		ng/L		93	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	112		ng/L		93	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		120	116		ng/L		96	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		120	115		ng/L		95	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		120	114		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	111		ng/L		92	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	119		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	110		ng/L		91	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	115		ng/L		96	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		120	116		ng/L		97	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	110		ng/L		92	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	110		ng/L		91	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		120	113		ng/L		94	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	108		ng/L		90	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	117		ng/L		97	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C3 HFPO-DA	*59*		*50 - 200*
13C6 PFDA	*79*		*50 - 200*
13C5 PFHxA	*59*		*50 - 200*
13C4 PFHpA	*60*		*50 - 200*
13C8 PFOA	*67*		*50 - 200*
13C9 PFNA	*77*		*50 - 200*
13C7 PFUnA	*85*		*50 - 200*
13C2 PFDoA	*87*		*50 - 200*
13C4 PFBA	*59*		*50 - 200*
13C5 PFPeA	*59*		*50 - 200*
13C3 PFBS	*94*		*50 - 200*
13C3 PFHxS	*96*		*50 - 200*

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

Lab Sample ID: 380-59313-1 MS
Matrix: Drinking Water
Analysis Batch: 54177

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
Prep Type: Total/NA
Prep Batch: 53809

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C8 PFOS	100		50 - 200
13C2-4:2-FTS	105		50 - 200
13C2-6:2-FTS	109		50 - 200
13C2-8:2-FTS	104		50 - 200

Lab Sample ID: 380-59313-1 MSD
Matrix: Drinking Water
Analysis Batch: 54177

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
Prep Type: Total/NA
Prep Batch: 53809

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		120	109		ng/L		91	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		120	115		ng/L		95	70 - 130	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		120	107		ng/L		89	70 - 130	5	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		120	122		ng/L		102	70 - 130	9	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		120	121		ng/L		100	70 - 130	2	30
Perfluorodecanoic acid (PFDA)	<2.0		120	122		ng/L		101	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)	<2.0		120	122		ng/L		101	70 - 130	3	30
Perfluoroheptanoic acid (PFHpA)	<2.0		120	116		ng/L		97	70 - 130	4	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		120	123		ng/L		102	70 - 130	6	30
Perfluorohexanoic acid (PFHxA)	<2.0		120	118		ng/L		97	70 - 130	2	30
Perfluorononanoic acid (PFNA)	<2.0		120	123		ng/L		103	70 - 130	9	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		120	115		ng/L		96	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	<2.0		120	115		ng/L		95	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		120	118		ng/L		98	70 - 130	3	30
Perfluorobutanoic acid (PFBA)	<2.0		120	115		ng/L		96	70 - 130	1	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		120	125		ng/L		104	70 - 130	12	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		120	120		ng/L		99	70 - 130	0	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		120	116		ng/L		97	70 - 130	6	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		120	105		ng/L		87	70 - 130	9	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		120	112		ng/L		93	70 - 130	3	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		120	110		ng/L		92	70 - 130	0	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		120	117		ng/L		97	70 - 130	6	30
Perfluoropentanoic acid (PFPeA)	<2.0		120	121		ng/L		100	70 - 130	6	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		120	113		ng/L		94	70 - 130	4	30

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

Lab Sample ID: 380-59313-1 MSD
Matrix: Drinking Water
Analysis Batch: 54177

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2
Prep Type: Total/NA
Prep Batch: 53809

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoropentanesulfonic acid (PFPeS)	<2.0		120	123		ng/L		102	70 - 130	6	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C3 HFPO-DA	*58*		*50 - 200*
13C6 PFDA	*81*		*50 - 200*
13C5 PFHxA	*64*		*50 - 200*
13C4 PFHpA	*65*		*50 - 200*
13C8 PFOA	*73*		*50 - 200*
13C9 PFNA	*78*		*50 - 200*
13C7 PFUnA	*83*		*50 - 200*
13C2 PFDoA	*85*		*50 - 200*
13C4 PFBA	*65*		*50 - 200*
13C5 PFPeA	*63*		*50 - 200*
13C3 PFBS	*93*		*50 - 200*
13C3 PFHxS	*90*		*50 - 200*
13C8 PFOS	*97*		*50 - 200*
13C2-4:2-FTS	*98*		*50 - 200*
13C2-6:2-FTS	*113*		*50 - 200*
13C2-8:2-FTS	*95*		*50 - 200*

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

Lab Sample ID: MBL 380-52324/23-A
Matrix: Water
Analysis Batch: 52651

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52324

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		08/18/23 11:04	08/22/23 04:03	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		08/18/23 11:04	08/22/23 04:03	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		08/18/23 11:04	08/22/23 04:03	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0		ng/L		08/18/23 11:04	08/22/23 04:03	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0		ng/L		08/18/23 11:04	08/22/23 04:03	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		08/18/23 11:04	08/22/23 04:03	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		08/18/23 11:04	08/22/23 04:03	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		08/18/23 11:04	08/22/23 04:03	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		08/18/23 11:04	08/22/23 04:03	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		08/18/23 11:04	08/22/23 04:03	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		08/18/23 11:04	08/22/23 04:03	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		08/18/23 11:04	08/22/23 04:03	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		08/18/23 11:04	08/22/23 04:03	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0		ng/L		08/18/23 11:04	08/22/23 04:03	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0		ng/L		08/18/23 11:04	08/22/23 04:03	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		08/18/23 11:04	08/22/23 04:03	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		08/18/23 11:04	08/22/23 04:03	1

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

Lab Sample ID: MBL 380-52324/23-A
Matrix: Water
Analysis Batch: 52651

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52324

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		08/18/23 11:04	08/22/23 04:03	1

Surrogate	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*97*		*70 - 130*	*08/18/23 11:04*	*08/22/23 04:03*	*1*
13C2 PFHxA	*100*		*70 - 130*	*08/18/23 11:04*	*08/22/23 04:03*	*1*
13C2 PFDA	*111*		*70 - 130*	*08/18/23 11:04*	*08/22/23 04:03*	*1*
13C3-GenX	*92*		*70 - 130*	*08/18/23 11:04*	*08/22/23 04:03*	*1*

Lab Sample ID: LCS 380-52324/25-A
Matrix: Water
Analysis Batch: 52651

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52324

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			25.1	20.9		ng/L		83	70 - 130		
Perfluorooctanesulfonic acid (PFOS)			23.2	24.6		ng/L		106	70 - 130		
Perfluoroundecanoic acid (PFUnA)			25.1	25.6		ng/L		102	70 - 130		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			25.1	26.2		ng/L		105	70 - 130		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			25.1	25.0		ng/L		100	70 - 130		
Perfluorohexanoic acid (PFHxA)			25.1	28.2		ng/L		112	70 - 130		
Perfluorododecanoic acid (PFDoA)			25.1	23.8		ng/L		95	70 - 130		
Perfluorooctanoic acid (PFOA)			25.1	27.5		ng/L		110	70 - 130		
Perfluorodecanoic acid (PFDA)			25.1	26.1		ng/L		104	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)			22.9	25.2		ng/L		110	70 - 130		
Perfluorobutanesulfonic acid (PFBS)			22.2	23.8		ng/L		108	70 - 130		
Perfluoroheptanoic acid (PFHpA)			25.1	27.9		ng/L		112	70 - 130		
Perfluorononanoic acid (PFNA)			25.1	27.3		ng/L		109	70 - 130		
Perfluorotetradecanoic acid (PFTA)			25.1	20.7		ng/L		82	70 - 130		
Perfluorotridecanoic acid (PFTrDA)			25.1	25.7		ng/L		102	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			23.4	24.9		ng/L		106	70 - 130		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			23.7	23.2		ng/L		98	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			23.7	25.5		ng/L		108	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
d5-NEtFOSAA	*100*		*70 - 130*
13C2 PFHxA	*124*		*70 - 130*
13C2 PFDA	*110*		*70 - 130*

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

Lab Sample ID: LCS 380-52324/25-A
Matrix: Water
Analysis Batch: 52651

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52324

Surrogate	LCS %Recovery	LCS Qualifier	Limits
13C3-GenX	111		70 - 130

Lab Sample ID: LCSD 380-52324/26-A
Matrix: Water
Analysis Batch: 52651

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 52324

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			25.1	20.9		ng/L		83	70 - 130	0	30
Perfluorooctanesulfonic acid (PFOS)			23.2	23.6		ng/L		102	70 - 130	4	30
Perfluoroundecanoic acid (PFUnA)			25.1	26.4		ng/L		105	70 - 130	3	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			25.1	26.0		ng/L		104	70 - 130	1	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			25.1	23.4		ng/L		94	70 - 130	6	30
Perfluorohexanoic acid (PFHxA)			25.1	26.5		ng/L		106	70 - 130	6	30
Perfluorododecanoic acid (PFDoA)			25.1	23.2		ng/L		93	70 - 130	3	30
Perfluorooctanoic acid (PFOA)			25.1	27.1		ng/L		108	70 - 130	2	30
Perfluorodecanoic acid (PFDA)			25.1	26.2		ng/L		104	70 - 130	0	30
Perfluorohexanesulfonic acid (PFHxS)			22.9	23.9		ng/L		104	70 - 130	5	30
Perfluorobutanesulfonic acid (PFBS)			22.2	21.8		ng/L		98	70 - 130	9	30
Perfluoroheptanoic acid (PFHpA)			25.1	26.1		ng/L		104	70 - 130	7	30
Perfluorononanoic acid (PFNA)			25.1	28.3		ng/L		113	70 - 130	4	30
Perfluorotetradecanoic acid (PFTA)			25.1	21.4		ng/L		86	70 - 130	4	30
Perfluorotridecanoic acid (PFTrDA)			25.1	25.8		ng/L		103	70 - 130	0	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			23.4	23.1		ng/L		99	70 - 130	8	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			23.7	21.2		ng/L		90	70 - 130	9	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			23.7	24.2		ng/L		102	70 - 130	5	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
d5-NEtFOSAA	92		70 - 130
13C2 PFHxA	111		70 - 130
13C2 PFDA	110		70 - 130
13C3-GenX	104		70 - 130

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

Lab Sample ID: MRL 380-52324/24-A
Matrix: Water
Analysis Batch: 52651

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52324

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.70	J	ng/L		85	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.85	2.05	J	ng/L		111	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.15	J	ng/L		107	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.23	J	ng/L		111	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.14	J	ng/L		107	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.40	J	ng/L		120	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	1.96	J	ng/L		98	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.61	J	ng/L		131	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.28	J	ng/L		114	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.83	2.16	J	ng/L		119	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.77	1.94	J	ng/L		110	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.46	J	ng/L		123	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.42	J	ng/L		121	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	1.92	J	ng/L		96	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.20	J	ng/L		110	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	1.87	2.01	J	ng/L		108	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.89	1.88	J	ng/L		99	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.89	2.07	J	ng/L		109	50 - 150

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
d5-NEtFOSAA	*101*		*70 - 130*
13C2 PFHxA	*109*		*70 - 130*
13C2 PFDA	*110*		*70 - 130*
13C3-GenX	*101*		*70 - 130*

Lab Sample ID: 380-58484-A-1-A MS
Matrix: Water
Analysis Batch: 52651

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52324

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.2	45.2		ng/L		90	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		46.5	48.8		ng/L		105	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.2	51.5		ng/L		103	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.2	52.6		ng/L		105	70 - 130

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

Lab Sample ID: 380-58484-A-1-A MS
Matrix: Water
Analysis Batch: 52651

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52324

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.2	45.7		ng/L		91	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		50.2	57.1		ng/L		114	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		50.2	49.8		ng/L		99	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		50.2	55.0		ng/L		109	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		50.2	53.0		ng/L		106	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		45.8	51.9		ng/L		113	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		44.4	48.5		ng/L		109	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		50.2	54.0		ng/L		108	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		50.2	53.5		ng/L		107	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		50.2	47.9		ng/L		96	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.2	51.5		ng/L		103	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		46.9	50.0		ng/L		107	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		47.4	46.5		ng/L		98	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		47.4	48.2		ng/L		102	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
d5-NEtFOSAA	*96*		*70 - 130*
13C2 PFHxA	*115*		*70 - 130*
13C2 PFDA	*112*		*70 - 130*
13C3-GenX	*109*		*70 - 130*

Lab Sample ID: 380-58484-A-1-B MSD
Matrix: Water
Analysis Batch: 52651

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 52324

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.1	45.9		ng/L		92	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		46.4	45.2		ng/L		97	70 - 130	8	30
Perfluoroundecanoic acid (PFUnA)	<2.0		50.1	52.5		ng/L		105	70 - 130	2	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.1	49.2		ng/L		98	70 - 130	7	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.1	44.7		ng/L		89	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		50.1	56.5		ng/L		113	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)	<2.0		50.1	48.9		ng/L		98	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	<2.0		50.1	51.9		ng/L		104	70 - 130	6	30
Perfluorodecanoic acid (PFDA)	<2.0		50.1	52.9		ng/L		106	70 - 130	0	30

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

Lab Sample ID: 380-58484-A-1-B MSD
Matrix: Water
Analysis Batch: 52651

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 52324

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	<2.0		45.7	46.2		ng/L		101	70 - 130	12	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		44.3	44.2		ng/L		100	70 - 130	9	30
Perfluoroheptanoic acid (PFHpA)	<2.0		50.1	52.3		ng/L		104	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		50.1	53.6		ng/L		107	70 - 130	0	30
Perfluorotetradecanoic acid (PFTA)	<2.0		50.1	47.5		ng/L		95	70 - 130	1	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.1	50.2		ng/L		100	70 - 130	3	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		46.8	48.5		ng/L		104	70 - 130	3	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		47.3	41.6		ng/L		88	70 - 130	11	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		47.3	47.9		ng/L		101	70 - 130	1	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
d5-NEtFOSAA	*92*		*70 - 130*
13C2 PFHxA	*122*		*70 - 130*
13C2 PFDA	*113*		*70 - 130*
13C3-GenX	*118*		*70 - 130*

Lab Sample ID: MBL 380-52741/23-A
Matrix: Water
Analysis Batch: 52924

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52741

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		08/22/23 10:08	08/25/23 00:28	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		08/22/23 10:08	08/25/23 00:28	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		08/22/23 10:08	08/25/23 00:28	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0		ng/L		08/22/23 10:08	08/25/23 00:28	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0		ng/L		08/22/23 10:08	08/25/23 00:28	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		08/22/23 10:08	08/25/23 00:28	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		08/22/23 10:08	08/25/23 00:28	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		08/22/23 10:08	08/25/23 00:28	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		08/22/23 10:08	08/25/23 00:28	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		08/22/23 10:08	08/25/23 00:28	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		08/22/23 10:08	08/25/23 00:28	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		08/22/23 10:08	08/25/23 00:28	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		08/22/23 10:08	08/25/23 00:28	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0		ng/L		08/22/23 10:08	08/25/23 00:28	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0		ng/L		08/22/23 10:08	08/25/23 00:28	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		08/22/23 10:08	08/25/23 00:28	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		08/22/23 10:08	08/25/23 00:28	1

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

Lab Sample ID: MBL 380-52741/23-A
Matrix: Water
Analysis Batch: 52924

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 52741

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		08/22/23 10:08	08/25/23 00:28	1

Surrogate	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*95*		*70 - 130*	*08/22/23 10:08*	*08/25/23 00:28*	*1*
13C2 PFHxA	*97*		*70 - 130*	*08/22/23 10:08*	*08/25/23 00:28*	*1*
13C2 PFDA	*118*		*70 - 130*	*08/22/23 10:08*	*08/25/23 00:28*	*1*
13C3-GenX	*86*		*70 - 130*	*08/22/23 10:08*	*08/25/23 00:28*	*1*

Lab Sample ID: LCS 380-52741/25-A
Matrix: Water
Analysis Batch: 52924

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52741

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			50.1	39.0		ng/L		78	70 - 130		
Perfluorooctanesulfonic acid (PFOS)			46.4	47.6		ng/L		103	70 - 130		
Perfluoroundecanoic acid (PFUnA)			50.1	49.5		ng/L		99	70 - 130		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			50.1	49.3		ng/L		98	70 - 130		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			50.1	45.6		ng/L		91	70 - 130		
Perfluorohexanoic acid (PFHxA)			50.1	51.9		ng/L		104	70 - 130		
Perfluorododecanoic acid (PFDoA)			50.1	47.5		ng/L		95	70 - 130		
Perfluorooctanoic acid (PFOA)			50.1	51.8		ng/L		103	70 - 130		
Perfluorodecanoic acid (PFDA)			50.1	49.3		ng/L		98	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)			45.7	44.7		ng/L		98	70 - 130		
Perfluorobutanesulfonic acid (PFBS)			44.3	42.8		ng/L		96	70 - 130		
Perfluoroheptanoic acid (PFHpA)			50.1	48.2		ng/L		96	70 - 130		
Perfluorononanoic acid (PFNA)			50.1	50.7		ng/L		101	70 - 130		
Perfluorotetradecanoic acid (PFTA)			50.1	46.1		ng/L		92	70 - 130		
Perfluorotridecanoic acid (PFTrDA)			50.1	48.1		ng/L		96	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			46.8	47.7		ng/L		102	70 - 130		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			47.3	44.9		ng/L		95	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			47.3	46.4		ng/L		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
d5-NEtFOSAA	*97*		*70 - 130*
13C2 PFHxA	*112*		*70 - 130*
13C2 PFDA	*109*		*70 - 130*

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

Lab Sample ID: LCS 380-52741/25-A
Matrix: Water
Analysis Batch: 52924

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52741

Surrogate	LCS %Recovery	LCS Qualifier	Limits
13C3-GenX	97		70 - 130

Lab Sample ID: LCSD 380-52741/26-A
Matrix: Water
Analysis Batch: 52924

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 52741

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			50.1	41.7		ng/L		83	70 - 130	7	30
Perfluorooctanesulfonic acid (PFOS)			46.4	48.7		ng/L		105	70 - 130	2	30
Perfluoroundecanoic acid (PFUnA)			50.1	48.7		ng/L		97	70 - 130	1	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			50.1	47.3		ng/L		94	70 - 130	4	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			50.1	43.6		ng/L		87	70 - 130	4	30
Perfluorohexanoic acid (PFHxA)			50.1	54.3		ng/L		108	70 - 130	5	30
Perfluorododecanoic acid (PFDoA)			50.1	46.4		ng/L		93	70 - 130	2	30
Perfluorooctanoic acid (PFOA)			50.1	53.6		ng/L		107	70 - 130	3	30
Perfluorodecanoic acid (PFDA)			50.1	51.6		ng/L		103	70 - 130	5	30
Perfluorohexanesulfonic acid (PFHxS)			45.7	44.2		ng/L		97	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)			44.3	47.0		ng/L		106	70 - 130	9	30
Perfluoroheptanoic acid (PFHpA)			50.1	50.4		ng/L		101	70 - 130	4	30
Perfluorononanoic acid (PFNA)			50.1	53.6		ng/L		107	70 - 130	5	30
Perfluorotetradecanoic acid (PFTA)			50.1	48.1		ng/L		96	70 - 130	4	30
Perfluorotridecanoic acid (PFTrDA)			50.1	48.8		ng/L		97	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			46.8	49.7		ng/L		106	70 - 130	4	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			47.3	44.7		ng/L		94	70 - 130	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			47.3	46.4		ng/L		98	70 - 130	0	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
d5-NEtFOSAA	98		70 - 130
13C2 PFHxA	127		70 - 130
13C2 PFDA	114		70 - 130
13C3-GenX	123		70 - 130

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

Lab Sample ID: MRL 380-52741/24-A
Matrix: Water
Analysis Batch: 52924

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 52741

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.74	J	ng/L		87	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.86	2.14	J	ng/L		115	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.12	J	ng/L		106	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.06	J	ng/L		103	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	1.87	J	ng/L		93	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.55	J	ng/L		127	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	1.97	J	ng/L		98	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.61	J	ng/L		130	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.24	J	ng/L		112	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.83	1.76	J	ng/L		96	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.77	2.10	J	ng/L		118	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.38	J	ng/L		119	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.50	J	ng/L		125	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.21	J	ng/L		110	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.14	J	ng/L		107	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	1.87	2.12	J	ng/L		113	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.89	1.98	J	ng/L		105	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.89	2.09	J	ng/L		110	50 - 150

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
d5-NEtFOSAA	*103*		*70 - 130*
13C2 PFHxA	*123*		*70 - 130*
13C2 PFDA	*122*		*70 - 130*
13C3-GenX	*103*		*70 - 130*

Lab Sample ID: 380-59502-A-1-B MS
Matrix: Water
Analysis Batch: 52924

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52741

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.2	44.5		ng/L		89	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		46.5	48.5		ng/L		104	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.2	49.4		ng/L		98	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.2	48.3		ng/L		96	70 - 130

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

Lab Sample ID: 380-59502-A-1-B MS
Matrix: Water
Analysis Batch: 52924

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 52741

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.2	43.4		ng/L		86	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		50.2	54.5		ng/L		109	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		50.2	47.2		ng/L		94	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		50.2	56.4		ng/L		112	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		50.2	49.7		ng/L		99	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		45.8	47.4		ng/L		104	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		44.4	48.3		ng/L		109	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		50.2	53.9		ng/L		107	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		50.2	54.9		ng/L		109	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		50.2	51.0		ng/L		102	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.2	49.4		ng/L		98	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		46.9	48.8		ng/L		104	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		47.4	45.4		ng/L		96	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		47.4	49.1		ng/L		103	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
d5-NEtFOSAA	*93*		*70 - 130*
13C2 PFHxA	*129*		*70 - 130*
13C2 PFDA	*111*		*70 - 130*
13C3-GenX	*123*		*70 - 130*

Lab Sample ID: 380-59502-A-1-C MSD
Matrix: Water
Analysis Batch: 52924

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 52741

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.2	43.9		ng/L		88	70 - 130	1	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		46.5	48.4		ng/L		104	70 - 130	0	30
Perfluoroundecanoic acid (PFUnA)	<2.0		50.2	51.6		ng/L		103	70 - 130	4	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.2	50.8		ng/L		101	70 - 130	5	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.2	43.8		ng/L		87	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<2.0		50.2	53.4		ng/L		106	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)	<2.0		50.2	50.1		ng/L		100	70 - 130	6	30
Perfluorooctanoic acid (PFOA)	<2.0		50.2	54.6		ng/L		109	70 - 130	3	30
Perfluorodecanoic acid (PFDA)	<2.0		50.2	52.7		ng/L		105	70 - 130	6	30

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

Lab Sample ID: 380-59502-A-1-C MSD
Matrix: Water
Analysis Batch: 52924

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 52741

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	<2.0		45.8	45.7		ng/L		100	70 - 130	4	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		44.4	47.0		ng/L		106	70 - 130	3	30
Perfluoroheptanoic acid (PFHpA)	<2.0		50.2	53.7		ng/L		107	70 - 130	0	30
Perfluorononanoic acid (PFNA)	<2.0		50.2	53.8		ng/L		107	70 - 130	2	30
Perfluorotetradecanoic acid (PFTA)	<2.0		50.2	49.3		ng/L		98	70 - 130	3	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.2	52.2		ng/L		104	70 - 130	5	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		46.9	49.3		ng/L		105	70 - 130	1	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		47.4	46.2		ng/L		97	70 - 130	2	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		47.4	49.1		ng/L		103	70 - 130	0	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
d5-NEtFOSAA	*99*		*70 - 130*
13C2 PFHxA	*127*		*70 - 130*
13C2 PFDA	*119*		*70 - 130*
13C3-GenX	*120*		*70 - 130*

GC/MS Semi VOA

Prep Batch: 52099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-59313-1	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	525.2	
380-59313-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	
MB 380-52099/1-A	Method Blank	Total/NA	Water	525.2	
LCS 380-52099/3-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-52099/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-52099/2-A	Lab Control Sample	Total/NA	Water	525.2	
380-59238-F-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-59242-F-1-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 52500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-59313-1	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	525.2	52099
380-59313-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	52099
MB 380-52099/1-A	Method Blank	Total/NA	Water	525.2	52099
LCS 380-52099/3-A	Lab Control Sample	Total/NA	Water	525.2	52099
LCSD 380-52099/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	52099
MRL 380-52099/2-A	Lab Control Sample	Total/NA	Water	525.2	52099
380-59238-F-1-A MS	Matrix Spike	Total/NA	Water	525.2	52099
380-59242-F-1-A DU	Duplicate	Total/NA	Water	525.2	52099

LCMS

Prep Batch: 52324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-59313-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	537.1 DW	
380-59313-5	FB: AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Water	537.1 DW	
380-59313-6	FB: AIEA GULCH WELLS PUMP 2	Total/NA	Water	537.1 DW	
MBL 380-52324/23-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-52324/25-A	Lab Control Sample	Total/NA	Water	537.1 DW	
LCSD 380-52324/26-A	Lab Control Sample Dup	Total/NA	Water	537.1 DW	
MRL 380-52324/24-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-58484-A-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-58484-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 52651

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-59313-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	537.1	52324
380-59313-5	FB: AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Water	537.1	52324
380-59313-6	FB: AIEA GULCH WELLS PUMP 2	Total/NA	Water	537.1	52324
MBL 380-52324/23-A	Method Blank	Total/NA	Water	537.1	52324
LCS 380-52324/25-A	Lab Control Sample	Total/NA	Water	537.1	52324
LCSD 380-52324/26-A	Lab Control Sample Dup	Total/NA	Water	537.1	52324
MRL 380-52324/24-A	Lab Control Sample	Total/NA	Water	537.1	52324
380-58484-A-1-A MS	Matrix Spike	Total/NA	Water	537.1	52324
380-58484-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	52324

Prep Batch: 52741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-59313-1	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	537.1 DW	
MBL 380-52741/23-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-52741/25-A	Lab Control Sample	Total/NA	Water	537.1 DW	

LCMS (Continued)

Prep Batch: 52741 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 380-52741/26-A	Lab Control Sample Dup	Total/NA	Water	537.1 DW	
MRL 380-52741/24-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-59502-A-1-B MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-59502-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 52924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-59313-1	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	537.1	52741
MBL 380-52741/23-A	Method Blank	Total/NA	Water	537.1	52741
LCS 380-52741/25-A	Lab Control Sample	Total/NA	Water	537.1	52741
LCSD 380-52741/26-A	Lab Control Sample Dup	Total/NA	Water	537.1	52741
MRL 380-52741/24-A	Lab Control Sample	Total/NA	Water	537.1	52741
380-59502-A-1-B MS	Matrix Spike	Total/NA	Water	537.1	52741
380-59502-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	52741

Prep Batch: 53809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-59313-1	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	533	
380-59313-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	533	
380-59313-5	FB: AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Water	533	
380-59313-6	FB: AIEA GULCH WELLS PUMP 2	Total/NA	Water	533	
MBL 380-53809/21-A	Method Blank	Total/NA	Water	533	
LCS 380-53809/23-A	Lab Control Sample	Total/NA	Water	533	
LCSD 380-53809/24-A	Lab Control Sample Dup	Total/NA	Water	533	
MRL 380-53809/22-A	Lab Control Sample	Total/NA	Water	533	
380-59313-1 MS	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	533	
380-59313-1 MSD	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	533	

Analysis Batch: 54177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-59313-1	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	533	53809
380-59313-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	533	53809
380-59313-5	FB: AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Water	533	53809
380-59313-6	FB: AIEA GULCH WELLS PUMP 2	Total/NA	Water	533	53809
MBL 380-53809/21-A	Method Blank	Total/NA	Water	533	53809
LCS 380-53809/23-A	Lab Control Sample	Total/NA	Water	533	53809
LCSD 380-53809/24-A	Lab Control Sample Dup	Total/NA	Water	533	53809
MRL 380-53809/22-A	Lab Control Sample	Total/NA	Water	533	53809
380-59313-1 MS	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	533	53809
380-59313-1 MSD	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	533	53809

Lab Chronicle

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

Job ID: 380-59313-1

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

Lab Sample ID: 380-59313-1
Matrix: Drinking Water
Date Collected: 08/14/23 11:14
Date Received: 08/16/23 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			52099	OTM3	EA POM	08/17/23 12:00
Total/NA	Analysis	525.2		1	52500	Q8LA	EA POM	08/20/23 17:48
Total/NA	Prep	533			53809	UMV1	EA POM	08/30/23 14:48
Total/NA	Analysis	533		1	54177	UKDT	EA POM	09/01/23 18:25
Total/NA	Prep	537.1 DW			52741	US1B	EA POM	08/22/23 10:08
Total/NA	Analysis	537.1		1	52924	UKYM	EA POM	08/25/23 04:32

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-59313-2
Matrix: Drinking Water
Date Collected: 08/14/23 10:32
Date Received: 08/16/23 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			52099	OTM3	EA POM	08/17/23 12:00
Total/NA	Analysis	525.2		1	52500	Q8LA	EA POM	08/20/23 18:08
Total/NA	Prep	533			53809	UMV1	EA POM	08/30/23 14:48
Total/NA	Analysis	533		1	54177	UKDT	EA POM	09/01/23 19:23
Total/NA	Prep	537.1 DW			52324	US1B	EA POM	08/18/23 11:04
Total/NA	Analysis	537.1		1	52651	UKYM	EA POM	08/22/23 09:27

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

Lab Sample ID: 380-59313-5
Matrix: Water
Date Collected: 08/14/23 11:14
Date Received: 08/16/23 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			53809	UMV1	EA POM	08/30/23 14:48
Total/NA	Analysis	533		1	54177	UKDT	EA POM	09/01/23 19:32
Total/NA	Prep	537.1 DW			52324	US1B	EA POM	08/18/23 11:04
Total/NA	Analysis	537.1		1	52651	UKYM	EA POM	08/22/23 05:50

Client Sample ID: FB: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-59313-6
Matrix: Water
Date Collected: 08/14/23 10:32
Date Received: 08/16/23 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			53809	UMV1	EA POM	08/30/23 14:48
Total/NA	Analysis	533		1	54177	UKDT	EA POM	09/01/23 19:42
Total/NA	Prep	537.1 DW			52324	US1B	EA POM	08/18/23 11:04
Total/NA	Analysis	537.1		1	52651	UKYM	EA POM	08/22/23 06:00

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: 380-59313-1

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: 380-59313-1

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: 380-59313-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-59313-1	AIEA WELLS PUMPS 1&2 (260) P2	Drinking Water	08/14/23 11:14	08/16/23 10:10	HI0000331
380-59313-2	AIEA GULCH WELLS PUMP 2	Drinking Water	08/14/23 10:32	08/16/23 10:10	HI0000331
380-59313-5	FB: AIEA WELLS PUMPS 1&2 (260) P2	Water	08/14/23 11:14	08/16/23 10:10	
380-59313-6	FB: AIEA GULCH WELLS PUMP 2	Water	08/14/23 10:32	08/16/23 10:10	

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

Chain of Custody Record

eurofins Environment Testing America

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

Analysis Requested

Preservation Codes

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

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	SUBCONTRACT - 8015 Gas (Purgable) LL (EAL)	SUBCONTRACT - 8915 Diesel LL (EAL) and Motor Oil	525.2_PREC - (MOD) 525plus PLUS TICs	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	537.1_DW_PREC - 537.1 Full List	533 - All Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code				R	R	RA		RA	Y	N		
AIEA WELLS PUMPS 1&2 (260) P2	14-Aug-2023	1114	G	Water			2		2	2	4				
AIEA GULCH WELLS PUMP2	14-Aug-2023	1032	G	Water			2		2	2	4				
TB AIEA WELLS PUMPS 1&2 (260)	14-Aug-2023	1114		Water							2				
TB AIEA GULCH WELLS PUMP2	14-Aug-2023	1032		Water							2				

380-59313 COC

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

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

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

Special Instructions/QC Requirements: ① 9730 5995 8257

Empty Kit Relinquished by	Date	Time	Method of Shipment: FED EX ② 9730 5995 8268

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
BAILEY	15 AUG 2023 1400	HBWS	G REITNER	08/16/2023 10:10	EEAP
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks
		(751A) GEL-FROZEN @ 3.5° 0.2°=3.5° / ② 1.5°-0.2°=1.3°

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 Environment Testing America

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 2 of 2
Company: City & County of Honolulu	PWSID:			Job #:
Address: 630 South Beretania Street, Chemistry Lab	Due Date Requested:			
City: Honolulu	TAT Requested (days):			
State Zip: HI, 96843	Compliance Project: Δ No			
Phone: 808-748-5091 (tel)	PO #: C20525101 exp 05312023			
Email: rfenstemacher@hbws org	WO #:			
Project Name: RED-HILL/HBWS sites Event Desc. RUSH Weekly Red Hill	Project #: 38001111			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
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		X	X	R	R	RA		RA	Y	N	X	
AIEA WELLS PUMPS 1&2 (260) P2	14-Aug-2023	1114	G	Water								3	3		
AIEA GULCH WELLS PUMP2	14-Aug-2023	1032	G	Water								3	3		
FB AIEA WELLS PUMPS 1&2 (260)	14-Aug-2023	1114		Water								1	1		
FB AIEA GULCH WELLS PUMP2	14-Aug-2023	1032		Water								1	1		

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

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

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

Special Instructions/QC Requirements: ① 7730 5995 8257

Empty Kit Relinquished by	Date	Time	Method of Shipment: FED Ex ② 7730 5995 8268	
Relinquished by: BAILEY	Date/Time: 15AUG2023 1400	Company: HBWS	Received by: G. PETTNER	Date/Time: 08/16/2023 10:10	Company: EEAP
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: (751A) GEL-FROZEN ①3.5°-0.2°=3.3° / ②1.5° 0.2°=1.3°

Ver 01/16/2019

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-59313-1

Login Number: 59313
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	