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ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
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Tel: (717)656-2300

Laboratory Job ID: 410-11496-1
Client Project/Site: PFC Investigation
Sampling Event: (GSES) General System Evaluation Samples

For:
Merrimack Village District
2 Greens Pond Road
Merrimack, New Hampshire 03054

Attn: Jill Lavoie

Authorized for release by:
9/1/2020 4:51:51 PM

Mary Kate Izzo, Project Manager
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Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments. QC data that exceed the upper limits and are associated with non-detect samples are qualified but no further narration is needed since the bias is high and does not change a non-detect result. Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Mary Kate Izzo
Project Manager
9/1/2020 4:51:51 PM

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Definitions/Glossary

Client: Merrimack Village District
Project/Site: PFC Investigation

Job ID: 410-11496-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*5	Isotope dilution analyte is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
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: 410-11496-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative
410-11496-1

Receipt
The samples were received on 8/21/2020 11:03 AM; the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.0°C

LCMS
Method PFC_IDA: The recovery for target analyte 1H,1H,2H,2H-perfluorododecanesulfonic acid (10:2) is outside the QC acceptance limits in the opening continuing calibration verification standard. Since the result is high and target 1H,1H,2H,2H-perfluorododecanesulfonic acid (10:2) is not detected in the following sample, the data is reported: MVD-2(T)/1531010_008 (410-11496-1), MVD-3(T)/1531010_003 (410-11496-2), MVD-7(R)/1531010_007 (410-11496-3), MVD-8(R)/1531010_009 (410-11496-4) and MVD-7/8 TP/1531010_508 (410-11496-5).

Method PFC_IDA: The recovery for the labeled isotope(s) in the following sample:MVD-8(R)/1531010_009 (410-11496-4) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken: This sample was re-extracted within the required holding time and the recovery for the labeled isotope(s) is again outside the QC acceptance limits.

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

Detection Summary

Client: Merrimack Village District
Project/Site: PFC Investigation

Job ID: 410-11496-1

Client Sample ID: MVD-2(T)/1531010_008 — Lab Sample ID: 410-11496-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	3.1		1.7	0.43	ng/L	1		T-WI14355 r12	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.2		1.7	0.43	ng/L	1		T-WI14355 r12	Total/NA
Perfluorooctanoic acid (PFOA)	11		1.7	0.43	ng/L	1		T-WI14355 r12	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.3		1.7	0.43	ng/L	1		T-WI14355 r12	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.84	J	1.7	0.43	ng/L	1		T-WI14355 r12	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.9		1.7	0.43	ng/L	1		T-WI14355 r12	Total/NA
Perfluorobutanoic acid (PFBA)	2.1	J	4.3	1.7	ng/L	1		T-WI14355 r12	Total/NA
Perfluoropentanoic acid (PFPA)	2.3		1.7	0.43	ng/L	1		T-WI14355 r12	Total/NA

Client Sample ID: MVD-3(T)/1531010_003 — Lab Sample ID: 410-11496-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	8.5		1.6	0.41	ng/L	1		T-WI14355 r12	Total/NA
Perfluoroheptanoic acid (PFHpA)	5.1		1.6	0.41	ng/L	1		T-WI14355 r12	Total/NA
Perfluorooctanoic acid (PFOA)	19		1.6	0.41	ng/L	1		T-WI14355 r12	Total/NA
Perfluorononanoic acid (PFNA)	0.79	J	1.6	0.41	ng/L	1		T-WI14355 r12	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.8		1.6	0.41	ng/L	1		T-WI14355 r12	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.75	J	1.6	0.41	ng/L	1		T-WI14355 r12	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.1		1.6	0.41	ng/L	1		T-WI14355 r12	Total/NA
Perfluorobutanoic acid (PFBA)	4.5		4.1	1.6	ng/L	1		T-WI14355 r12	Total/NA
Perfluoropentanoic acid (PFPA)	6.5		1.6	0.41	ng/L	1		T-WI14355 r12	Total/NA

Client Sample ID: MVD-7(R)/1531010_007 — Lab Sample ID: 410-11496-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	3.2		1.7	0.41	ng/L	1		T-WI14355 r12	Total/NA
Perfluoroheptanoic acid (PFHpA)	3.2		1.7	0.41	ng/L	1		T-WI14355 r12	Total/NA
Perfluorooctanoic acid (PFOA)	24		1.7	0.41	ng/L	1		T-WI14355 r12	Total/NA
Perfluorononanoic acid (PFNA)	0.71	J	1.7	0.41	ng/L	1		T-WI14355 r12	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.9		1.7	0.41	ng/L	1		T-WI14355 r12	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.5	J	1.7	0.41	ng/L	1		T-WI14355 r12	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.1		1.7	0.41	ng/L	1		T-WI14355 r12	Total/NA
Perfluorobutanoic acid (PFBA)	2.5	J	4.1	1.7	ng/L	1		T-WI14355 r12	Total/NA
Perfluoropentanoic acid (PFPA)	2.4		1.7	0.41	ng/L	1		T-WI14355 r12	Total/NA

Client Sample ID: MVD-8(R)/1531010_009 — Lab Sample ID: 410-11496-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	2.5		1.7	0.43	ng/L	1		T-WI14355 r12	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.7		1.7	0.43	ng/L	1		T-WI14355 r12	Total/NA
Perfluorooctanoic acid (PFOA)	19		1.7	0.43	ng/L	1		T-WI14355 r12	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.6	J	1.7	0.43	ng/L	1		T-WI14355 r12	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.2	J	1.7	0.43	ng/L	1		T-WI14355 r12	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.8		1.7	0.43	ng/L	1		T-WI14355 r12	Total/NA
Perfluorobutanoic acid (PFBA)	1.8	J	4.3	1.7	ng/L	1		T-WI14355 r12	Total/NA
Perfluoropentanoic acid (PFPA)	2.0		1.7	0.43	ng/L	1		T-WI14355 r12	Total/NA

Client Sample ID: MVD-7/8 TP/1531010_508 — Lab Sample ID: 410-11496-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanoic acid (PFHxA)	3.0		1.6	0.41	ng/L	1		T-WI14355 r12	Total/NA
Perfluoroheptanoic acid (PFHpA)	3.0		1.6	0.41	ng/L	1		T-WI14355 r12	Total/NA
Perfluorooctanoic acid (PFOA)	21		1.6	0.41	ng/L	1		T-WI14355 r12	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Detection Summary

Client: Merrimack Village District
Project/Site: PFC Investigation

Job ID: 410-11496-1

Client Sample ID: MVD-7/8 TP/1531010_508 (Continued) — Lab Sample ID: 410-11496-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorononanoic acid (PFNA)	0.68	J	1.6	0.41	ng/L	1		T-WI14355 r12	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.7		1.6	0.41	ng/L	1		T-WI14355 r12	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.3	J	1.6	0.41	ng/L	1		T-WI14355 r12	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.4		1.6	0.41	ng/L	1		T-WI14355 r12	Total/NA
Perfluorobutanoic acid (PFBA)	2.1	J	4.1	1.6	ng/L	1		T-WI14355 r12	Total/NA
Perfluoropentanoic acid (PFPA)	2.3		1.6	0.41	ng/L	1		T-WI14355 r12	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Merrimack Village District
Project/Site: PFC Investigation

Job ID: 410-11496-1

Client Sample ID: MVD-2(T)/1531010_008
Date Collected: 08/20/20 11:43
Date Received: 08/21/20 11:03

Lab Sample ID: 410-11496-1
Matrix: Water

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**3.1**		1.7	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluoroheptanoic acid (PFHpA)	**2.2**		1.7	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluorooctanoic acid (PFOA)	**11**		1.7	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.7	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluorobutanesulfonic acid (PFBS)	**2.3**		1.7	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluorohexanesulfonic acid (PFHxS)	**0.84**	**J**	1.7	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluorooctanesulfonic acid (PFOS)	**1.9**		1.7	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
NEtFOSAA	ND		2.6	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
NMeFOSAA	ND		1.7	0.51	ng/L		08/23/20 10:59	08/23/20 22:49	1
10:2 Fluorotelomer sulfonic acid	ND		4.3	0.86	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluorononanesulfonic acid (PFNS)	ND		1.7	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.6	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.7	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	ND		2.6	0.86	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		2.6	0.86	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluorobutanoic acid (PFBA)	**2.1**	**J**	4.3	1.7	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluoropentanoic acid (PFPA)	**2.3**		1.7	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
NMeFOSE	ND		2.6	0.86	ng/L		08/23/20 10:59	08/23/20 22:49	1
NMeFOSA	ND		2.6	0.86	ng/L		08/23/20 10:59	08/23/20 22:49	1
NEtFOSE	ND		2.6	0.86	ng/L		08/23/20 10:59	08/23/20 22:49	1
NEtFOSA	ND		4.3	0.86	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
4:2 Fluorotelomer sulfonic acid	ND		1.7	0.43	ng/L		08/23/20 10:59	08/23/20 22:49	1
6:2 Fluorotelomer sulfonic acid	ND		4.3	1.7	ng/L		08/23/20 10:59	08/23/20 22:49	1
8:2 Fluorotelomer sulfonic acid	ND		2.6	0.86	ng/L		08/23/20 10:59	08/23/20 22:49	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*109*		*22 - 169*	*08/23/20 10:59*	*08/23/20 22:49*	*1*
M2-8:2 FTS	*103*		*37 - 169*	*08/23/20 10:59*	*08/23/20 22:49*	*1*
M2-6:2 FTS	*95*		*29 - 182*	*08/23/20 10:59*	*08/23/20 22:49*	*1*
13C5 PFHxA	*81*		*36 - 137*	*08/23/20 10:59*	*08/23/20 22:49*	*1*
13C4 PFHpA	*85*		*33 - 140*	*08/23/20 10:59*	*08/23/20 22:49*	*1*
13C8 PFOA	*85*		*52 - 124*	*08/23/20 10:59*	*08/23/20 22:49*	*1*
13C9 PFNA	*87*		*48 - 130*	*08/23/20 10:59*	*08/23/20 22:49*	*1*
13C6 PFDA	*88*		*50 - 124*	*08/23/20 10:59*	*08/23/20 22:49*	*1*
13C7 PFUnA	*87*		*44 - 128*	*08/23/20 10:59*	*08/23/20 22:49*	*1*
13C2-PFDoDA	*91*		*36 - 127*	*08/23/20 10:59*	*08/23/20 22:49*	*1*

Client Sample ID: MVD-2(T)/1531010_008

Lab Sample ID: 410-11496-1

Date Collected: 08/20/20 11:43

Matrix: Water

Date Received: 08/21/20 11:03

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12 (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFTeDA	83		21 - 134	08/23/20 10:59	08/23/20 22:49	1
13C3 PFBS	106		23 - 175	08/23/20 10:59	08/23/20 22:49	1
13C3 PFHxS	84		35 - 143	08/23/20 10:59	08/23/20 22:49	1
13C8 PFOS	83		52 - 121	08/23/20 10:59	08/23/20 22:49	1
d3-NMeFOSAA	86		36 - 143	08/23/20 10:59	08/23/20 22:49	1
d5-NEtFOSAA	95		42 - 149	08/23/20 10:59	08/23/20 22:49	1
13C8 FOSA	82		10 - 134	08/23/20 10:59	08/23/20 22:49	1
13C4 PFBA	86		43 - 130	08/23/20 10:59	08/23/20 22:49	1
13C5 PFPeA	97		38 - 150	08/23/20 10:59	08/23/20 22:49	1
d7-N-MeFOSE-M	74		10 - 137	08/23/20 10:59	08/23/20 22:49	1
d3-NMePFOSA	57		10 - 107	08/23/20 10:59	08/23/20 22:49	1
d9-N-EtFOSE-M	79		10 - 135	08/23/20 10:59	08/23/20 22:49	1
d5-NEtPFOSA	61		10 - 107	08/23/20 10:59	08/23/20 22:49	1

Client Sample ID: MVD-3(T)/1531010_003

Lab Sample ID: 410-11496-2

Date Collected: 08/20/20 10:50

Matrix: Water

Date Received: 08/21/20 11:03

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**8.5**		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluoroheptanoic acid (PFHpA)	**5.1**		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluorooctanoic acid (PFOA)	**19**		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluorononanoic acid (PFNA)	**0.79**	**J**	1.6	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluorobutanesulfonic acid (PFBS)	**3.8**		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluorohexanesulfonic acid (PFHxS)	**0.75**	**J**	1.6	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluorooctanesulfonic acid (PFOS)	**2.1**		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
NEtFOSAA	ND		2.5	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
NMeFOSAA	ND		1.6	0.49	ng/L		08/23/20 10:59	08/23/20 22:59	1
10:2 Fluorotelomer sulfonic acid	ND		4.1	0.82	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.5	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	ND		2.5	0.82	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		2.5	0.82	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluorobutanoic acid (PFBA)	**4.5**		4.1	1.6	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluoropentanoic acid (PFPA)	**6.5**		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
NMeFOSE	ND		2.5	0.82	ng/L		08/23/20 10:59	08/23/20 22:59	1

Client Sample ID: MVD-3(T)/1531010_003

Lab Sample ID: 410-11496-2

Date Collected: 08/20/20 10:50
Matrix: Water
Date Received: 08/21/20 11:03

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NMeFOSA	ND		2.5	0.82	ng/L		08/23/20 10:59	08/23/20 22:59	1
NEtFOSE	ND		2.5	0.82	ng/L		08/23/20 10:59	08/23/20 22:59	1
NEtFOSA	ND		4.1	0.82	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
4:2 Fluorotelomer sulfonic acid	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 22:59	1
6:2 Fluorotelomer sulfonic acid	ND		4.1	1.6	ng/L		08/23/20 10:59	08/23/20 22:59	1
8:2 Fluorotelomer sulfonic acid	ND		2.5	0.82	ng/L		08/23/20 10:59	08/23/20 22:59	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*128*		*20 - 187*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
M2-8:2 FTS	*102*		*34 - 182*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
M2-6:2 FTS	*103*		*29 - 189*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
13C5 PFHxA	*79*		*31 - 142*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
13C4 PFHpA	*84*		*30 - 144*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
13C8 PFOA	*81*		*49 - 127*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
13C9 PFNA	*89*		*47 - 136*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
13C6 PFDA	*83*		*47 - 128*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
13C7 PFUnA	*83*		*40 - 135*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
13C2-PFDoDA	*86*		*28 - 136*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
13C2 PFTeDA	*78*		*10 - 144*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
13C3 PFBS	*117*		*19 - 178*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
13C3 PFHxS	*79*		*32 - 145*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
13C8 PFOS	*82*		*49 - 126*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
d3-NMeFOSAA	*86*		*32 - 151*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
d5-NEtFOSAA	*88*		*37 - 164*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
13C8 FOSA	*80*		*10 - 143*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
13C4 PFBA	*87*		*41 - 132*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
13C5 PFPeA	*104*		*33 - 155*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
d7-N-MeFOSE-M	*68*		*10 - 143*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
d3-NMePFOSA	*50*		*10 - 107*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
d9-N-EtFOSE-M	*76*		*10 - 142*	*08/23/20 10:59*	*08/23/20 22:59*	*1*
d5-NEtPFOSA	*50*		*10 - 108*	*08/23/20 10:59*	*08/23/20 22:59*	*1*

Client Sample ID: MVD-7(R)/1531010_007

Lab Sample ID: 410-11496-3

Date Collected: 08/20/20 11:13
Matrix: Water
Date Received: 08/21/20 11:03

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**3.2**		1.7	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1
Perfluoroheptanoic acid (PFHpA)	**3.2**		1.7	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1
Perfluorooctanoic acid (PFOA)	**24**		1.7	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1
Perfluorononanoic acid (PFNA)	**0.71**	**J**	1.7	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.7	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1
Perfluorobutanesulfonic acid (PFBS)	**1.9**		1.7	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1
Perfluorohexanesulfonic acid (PFHxS)	**1.5**	**J**	1.7	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1

Client: Merrimack Village District
Project/Site: PFC Investigation

Job ID: 410-11496-1

Client Sample ID: MVD-7(R)/1531010_007
Date Collected: 08/20/20 11:13
Date Received: 08/21/20 11:03

Lab Sample ID: 410-11496-3
Matrix: Water

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	**3.1**		1.7	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1
NEtFOSAA	ND		2.5	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1
NMeFOSAA	ND		1.7	0.50	ng/L		08/23/20 10:59	08/23/20 23:09	1
10:2 Fluorotelomer sulfonic acid	ND		4.1	0.83	ng/L		08/23/20 10:59	08/23/20 23:09	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1
Perfluorononanesulfonic acid (PFNS)	ND		1.7	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.5	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.7	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	ND		2.5	0.83	ng/L		08/23/20 10:59	08/23/20 23:09	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		2.5	0.83	ng/L		08/23/20 10:59	08/23/20 23:09	1
Perfluorobutanoic acid (PFBA)	**2.5**	**J**	4.1	1.7	ng/L		08/23/20 10:59	08/23/20 23:09	1
Perfluoropentanoic acid (PFPA)	**2.4**		1.7	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1
NMeFOSE	ND		2.5	0.83	ng/L		08/23/20 10:59	08/23/20 23:09	1
NMeFOSA	ND		2.5	0.83	ng/L		08/23/20 10:59	08/23/20 23:09	1
NEtFOSE	ND		2.5	0.83	ng/L		08/23/20 10:59	08/23/20 23:09	1
NEtFOSA	ND		4.1	0.83	ng/L		08/23/20 10:59	08/23/20 23:09	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1
4:2 Fluorotelomer sulfonic acid	ND		1.7	0.41	ng/L		08/23/20 10:59	08/23/20 23:09	1
6:2 Fluorotelomer sulfonic acid	ND		4.1	1.7	ng/L		08/23/20 10:59	08/23/20 23:09	1
8:2 Fluorotelomer sulfonic acid	ND		2.5	0.83	ng/L		08/23/20 10:59	08/23/20 23:09	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*122*		*20 - 187*	*08/23/20 10:59*	*08/23/20 23:09*	*1*
M2-8:2 FTS	*89*		*34 - 182*	*08/23/20 10:59*	*08/23/20 23:09*	*1*
M2-6:2 FTS	*109*		*29 - 189*	*08/23/20 10:59*	*08/23/20 23:09*	*1*
13C5 PFHxA	*79*		*31 - 142*	*08/23/20 10:59*	*08/23/20 23:09*	*1*
13C4 PFHpA	*83*		*30 - 144*	*08/23/20 10:59*	*08/23/20 23:09*	*1*
13C8 PFOA	*80*		*49 - 127*	*08/23/20 10:59*	*08/23/20 23:09*	*1*
13C9 PFNA	*89*		*47 - 136*	*08/23/20 10:59*	*08/23/20 23:09*	*1*
13C6 PFDA	*80*		*47 - 128*	*08/23/20 10:59*	*08/23/20 23:09*	*1*
13C7 PFUnA	*77*		*40 - 135*	*08/23/20 10:59*	*08/23/20 23:09*	*1*
13C2-PFDoDA	*81*		*28 - 136*	*08/23/20 10:59*	*08/23/20 23:09*	*1*
13C2 PFTeDA	*66*		*10 - 144*	*08/23/20 10:59*	*08/23/20 23:09*	*1*
13C3 PFBS	*111*		*19 - 178*	*08/23/20 10:59*	*08/23/20 23:09*	*1*
13C3 PFHxS	*79*		*32 - 145*	*08/23/20 10:59*	*08/23/20 23:09*	*1*
13C8 PFOS	*84*		*49 - 126*	*08/23/20 10:59*	*08/23/20 23:09*	*1*
d3-NMeFOSAA	*80*		*32 - 151*	*08/23/20 10:59*	*08/23/20 23:09*	*1*
d5-NEtFOSAA	*82*		*37 - 164*	*08/23/20 10:59*	*08/23/20 23:09*	*1*
13C8 FOSA	*63*		*10 - 143*	*08/23/20 10:59*	*08/23/20 23:09*	*1*
13C4 PFBA	*82*		*41 - 132*	*08/23/20 10:59*	*08/23/20 23:09*	*1*
13C5 PFPeA	*100*		*33 - 155*	*08/23/20 10:59*	*08/23/20 23:09*	*1*
d7-N-MeFOSE-M	*35*		*10 - 143*	*08/23/20 10:59*	*08/23/20 23:09*	*1*
d3-NMePFOSA	*11*		*10 - 107*	*08/23/20 10:59*	*08/23/20 23:09*	*1*

Client Sample ID: MVD-7(R)/1531010_007

Lab Sample ID: 410-11496-3

Date Collected: 08/20/20 11:13
Matrix: Water
Date Received: 08/21/20 11:03

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12 (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d9-N-EtFOSE-M	33		10 - 142	08/23/20 10:59	08/23/20 23:09	1
d5-NEtPFOSA	11		10 - 108	08/23/20 10:59	08/23/20 23:09	1

Client Sample ID: MVD-8(R)/1531010_009

Lab Sample ID: 410-11496-4

Date Collected: 08/20/20 11:19
Matrix: Water
Date Received: 08/21/20 11:03

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**2.5**		1.7	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluoroheptanoic acid (PFHpA)	**2.7**		1.7	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluorooctanoic acid (PFOA)	**19**		1.7	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.7	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluorobutanesulfonic acid (PFBS)	**1.6**	**J**	1.7	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluorohexanesulfonic acid (PFHxS)	**1.2**	**J**	1.7	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluorooctanesulfonic acid (PFOS)	**1.8**		1.7	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
NEtFOSAA	ND		2.6	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
NMeFOSAA	ND		1.7	0.51	ng/L		08/24/20 17:26	08/27/20 06:18	1
10:2 Fluorotelomer sulfonic acid	ND		4.3	0.85	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.7	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluorononanesulfonic acid (PFNS)	ND		1.7	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluorododecanesulfonic acid (PFDoS)	ND		2.6	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.7	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	ND		2.6	0.85	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		2.6	0.85	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluorobutanoic acid (PFBA)	**1.8**	**J**	4.3	1.7	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluoropentanoic acid (PFPA)	**2.0**		1.7	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
NMeFOSE	ND		2.6	0.85	ng/L		08/24/20 17:26	08/27/20 06:18	1
NMeFOSA	ND		2.6	0.85	ng/L		08/24/20 17:26	08/27/20 06:18	1
NEtFOSE	ND		2.6	0.85	ng/L		08/24/20 17:26	08/27/20 06:18	1
NEtFOSA	ND		4.3	0.85	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
4:2 Fluorotelomer sulfonic acid	ND		1.7	0.43	ng/L		08/24/20 17:26	08/27/20 06:18	1
6:2 Fluorotelomer sulfonic acid	ND		4.3	1.7	ng/L		08/24/20 17:26	08/27/20 06:18	1
8:2 Fluorotelomer sulfonic acid	ND		2.6	0.85	ng/L		08/24/20 17:26	08/27/20 06:18	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-4:2 FTS	131		20 - 187	08/24/20 17:26	08/27/20 06:18	1
M2-8:2 FTS	116		34 - 182	08/24/20 17:26	08/27/20 06:18	1

Client Sample ID: MVD-8(R)/1531010_009

Lab Sample ID: 410-11496-4

Date Collected: 08/20/20 11:19

Matrix: Water

Date Received: 08/21/20 11:03

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12 (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-6:2 FTS	120		29 - 189	08/24/20 17:26	08/27/20 06:18	1
13C5 PFHxA	95		31 - 142	08/24/20 17:26	08/27/20 06:18	1
13C4 PFHpA	90		30 - 144	08/24/20 17:26	08/27/20 06:18	1
13C8 PFOA	93		49 - 127	08/24/20 17:26	08/27/20 06:18	1
13C9 PFNA	95		47 - 136	08/24/20 17:26	08/27/20 06:18	1
13C6 PFDA	92		47 - 128	08/24/20 17:26	08/27/20 06:18	1
13C7 PFUnA	102		40 - 135	08/24/20 17:26	08/27/20 06:18	1
13C2-PFDoDA	96		28 - 136	08/24/20 17:26	08/27/20 06:18	1
13C2 PFTeDA	78		10 - 144	08/24/20 17:26	08/27/20 06:18	1
13C3 PFBS	112		19 - 178	08/24/20 17:26	08/27/20 06:18	1
13C3 PFHxS	95		32 - 145	08/24/20 17:26	08/27/20 06:18	1
13C8 PFOS	92		49 - 126	08/24/20 17:26	08/27/20 06:18	1
d3-NMeFOSAA	105		32 - 151	08/24/20 17:26	08/27/20 06:18	1
d5-NEtFOSAA	111		37 - 164	08/24/20 17:26	08/27/20 06:18	1
13C8 FOSA	53		10 - 143	08/24/20 17:26	08/27/20 06:18	1
13C4 PFBA	89		41 - 132	08/24/20 17:26	08/27/20 06:18	1
13C5 PFPeA	104		33 - 155	08/24/20 17:26	08/27/20 06:18	1
d7-N-MeFOSE-M	21		10 - 143	08/24/20 17:26	08/27/20 06:18	1
d3-NMePFOSA	1	*5	10 - 107	08/24/20 17:26	08/27/20 06:18	1
d9-N-EtFOSE-M	17		10 - 142	08/24/20 17:26	08/27/20 06:18	1
d5-NEtPFOSA	2	*5	10 - 108	08/24/20 17:26	08/27/20 06:18	1

Client Sample ID: MVD-7/8 TP/1531010_508

Lab Sample ID: 410-11496-5

Date Collected: 08/20/20 11:25

Matrix: Water

Date Received: 08/21/20 11:03

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	**3.0**		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1
Perfluoroheptanoic acid (PFHpA)	**3.0**		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1
Perfluorooctanoic acid (PFOA)	**21**		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1
Perfluorononanoic acid (PFNA)	**0.68**	**J**	1.6	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1
Perfluorobutanesulfonic acid (PFBS)	**1.7**		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1
Perfluorohexanesulfonic acid (PFHxS)	**1.3**	**J**	1.6	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1
Perfluorooctanesulfonic acid (PFOS)	**2.4**		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1
NEtFOSAA	ND		2.5	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1
NMeFOSAA	ND		1.6	0.49	ng/L		08/23/20 10:59	08/23/20 23:29	1
10:2 Fluorotelomer sulfonic acid	ND		4.1	0.82	ng/L		08/23/20 10:59	08/23/20 23:29	1
Perfluoropentanesulfonic acid (PFPeS)	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1
Perfluorononanesulfonic acid (PFNS)	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1

Client: Merrimack Village District
Project/Site: PFC Investigation

Job ID: 410-11496-1

Client Sample ID: MVD-7/8 TP/1531010_508
Date Collected: 08/20/20 11:25
Date Received: 08/21/20 11:03

Lab Sample ID: 410-11496-5
Matrix: Water

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12 (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanesulfonic acid (PFDoS)	ND		2.5	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1
Perfluorooctanesulfonamide (PFOSA)	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	ND		2.5	0.82	ng/L		08/23/20 10:59	08/23/20 23:29	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		2.5	0.82	ng/L		08/23/20 10:59	08/23/20 23:29	1
Perfluorobutanoic acid (PFBA)	**2.1**	**J**	4.1	1.6	ng/L		08/23/20 10:59	08/23/20 23:29	1
Perfluoropentanoic acid (PFPA)	**2.3**		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1
NMeFOSE	ND		2.5	0.82	ng/L		08/23/20 10:59	08/23/20 23:29	1
NMeFOSA	ND		2.5	0.82	ng/L		08/23/20 10:59	08/23/20 23:29	1
NEtFOSE	ND		2.5	0.82	ng/L		08/23/20 10:59	08/23/20 23:29	1
NEtFOSA	ND		4.1	0.82	ng/L		08/23/20 10:59	08/23/20 23:29	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1
4:2 Fluorotelomer sulfonic acid	ND		1.6	0.41	ng/L		08/23/20 10:59	08/23/20 23:29	1
6:2 Fluorotelomer sulfonic acid	ND		4.1	1.6	ng/L		08/23/20 10:59	08/23/20 23:29	1
8:2 Fluorotelomer sulfonic acid	ND		2.5	0.82	ng/L		08/23/20 10:59	08/23/20 23:29	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*121*		*20 - 187*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
M2-8:2 FTS	*88*		*34 - 182*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
M2-6:2 FTS	*97*		*29 - 189*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
13C5 PFHxA	*75*		*31 - 142*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
13C4 PFHpA	*81*		*30 - 144*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
13C8 PFOA	*81*		*49 - 127*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
13C9 PFNA	*80*		*47 - 136*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
13C6 PFDA	*80*		*47 - 128*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
13C7 PFUnA	*72*		*40 - 135*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
13C2-PFDoDA	*80*		*28 - 136*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
13C2 PFTeDA	*67*		*10 - 144*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
13C3 PFBS	*111*		*19 - 178*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
13C3 PFHxS	*80*		*32 - 145*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
13C8 PFOS	*82*		*49 - 126*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
d3-NMeFOSAA	*68*		*32 - 151*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
d5-NEtFOSAA	*75*		*37 - 164*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
13C8 FOSA	*70*		*10 - 143*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
13C4 PFBA	*82*		*41 - 132*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
13C5 PFPeA	*100*		*33 - 155*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
d7-N-MeFOSE-M	*62*		*10 - 143*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
d3-NMePFOSA	*45*		*10 - 107*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
d9-N-EtFOSE-M	*66*		*10 - 142*	*08/23/20 10:59*	*08/23/20 23:29*	*1*
d5-NEtPFOSA	*43*		*10 - 108*	*08/23/20 10:59*	*08/23/20 23:29*	*1*

Isotope Dilution Summary

Client: Merrimack Village District
Project/Site: PFC Investigation

Job ID: 410-11496-1

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M242FTS (22-169)	M282FTS (37-169)	M262FTS (29-182)	13C5PHA (36-137)	C4PFHA (33-140)	C8PFOA (52-124)	C9PFNA (48-130)	C6PFDA (50-124)
410-11496-1	MVD-2(T)/1531010_008	109	103	95	81	85	85	87	88
LCS 410-36260/2-A	Lab Control Sample	103	112	109	105	100	105	109	109
LCSD 410-36260/3-A	Lab Control Sample Dup	113	109	115	109	107	104	100	101
MB 410-36260/1-A	Method Blank	117	116	122	111	105	113	102	113

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	13C7PUA (44-128)	PFDoDA (36-127)	PFTDA (21-134)	C3PFBS (23-175)	C3PFHS (35-143)	C8PFOS (52-121)	d3NMFOS (36-143)	d5NEFOS (42-149)
410-11496-1	MVD-2(T)/1531010_008	87	91	83	106	84	83	86	95
LCS 410-36260/2-A	Lab Control Sample	120	123	117	105	104	109	111	125
LCSD 410-36260/3-A	Lab Control Sample Dup	107	104	97	103	105	100	107	108
MB 410-36260/1-A	Method Blank	111	112	103	99	109	102	108	109

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFOSA (10-134)	PFBA (43-130)	PFPeA (38-150)	NMFM (10-137)	d3NMFSA (10-107)	NEFM (10-135)	d5NPFSA (10-107)	
410-11496-1	MVD-2(T)/1531010_008	82	86	97	74	57	79	61	
LCS 410-36260/2-A	Lab Control Sample	97	108	105	91	62	93	66	
LCSD 410-36260/3-A	Lab Control Sample Dup	95	106	104	86	65	93	68	
MB 410-36260/1-A	Method Blank	98	102	100	94	73	98	77	

Surrogate Legend

M242FTS = M2-4:2 FTS
M282FTS = M2-8:2 FTS
M262FTS = M2-6:2 FTS
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDoDA = 13C2-PFDoDA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
PFOSA = 13C8 FOSA
PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
NMFM = d7-N-MeFOSE-M
d3NMFSA = d3-NMePFOSA
NEFM = d9-N-EtFOSE-M
d5NPFSA = d5-NEtPFOSA

Isotope Dilution Summary

Client: Merrimack Village District
Project/Site: PFC Investigation

Job ID: 410-11496-1

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M242FTS (20-187)	M282FTS (34-182)	M262FTS (29-189)	13C5PHA (31-142)	C4PFHA (30-144)	C8PFOA (49-127)	C9PFNA (47-136)	C6PFDA (47-128)
410-11496-2	MVD-3(T)/1531010_003	128	102	103	79	84	81	89	83
410-11496-3	MVD-7(R)/1531010_007	122	89	109	79	83	80	89	80
410-11496-4	MVD-8(R)/1531010_009	131	116	120	95	90	93	95	92
410-11496-5	MVD-7/8 TP/1531010_508	121	88	97	75	81	81	80	80
LCS 410-36638/2-A	Lab Control Sample	108	108	112	101	92	95	100	98
LCSD 410-36638/3-A	Lab Control Sample Dup	106	109	113	98	92	96	98	96
MB 410-36638/1-A	Method Blank	52	58	55	49	46	50	48	50

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	13C7PUA (40-135)	PFDoDA (28-136)	PFTDA (10-144)	C3PFBS (19-178)	C3PFHS (32-145)	C8PFOS (49-126)	d3NMFOS (32-151)	d5NEFOS (37-164)
410-11496-2	MVD-3(T)/1531010_003	83	86	78	117	79	82	86	88
410-11496-3	MVD-7(R)/1531010_007	77	81	66	111	79	84	80	82
410-11496-4	MVD-8(R)/1531010_009	102	96	78	112	95	92	105	111
410-11496-5	MVD-7/8 TP/1531010_508	72	80	67	111	80	82	68	75
LCS 410-36638/2-A	Lab Control Sample	102	101	86	96	93	96	105	113
LCSD 410-36638/3-A	Lab Control Sample Dup	97	95	85	103	92	95	105	105
MB 410-36638/1-A	Method Blank	56	58	50	50	50	50	57	68

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	PFOSA (10-143)	PFBA (41-132)	PFPeA (33-155)	NMFM (10-143)	d3NMFSA (10-107)	NEFM (10-142)	d5NPFSA (10-108)
410-11496-2	MVD-3(T)/1531010_003	80	87	104	68	50	76	50
410-11496-3	MVD-7(R)/1531010_007	63	82	100	35	11	33	11
410-11496-4	MVD-8(R)/1531010_009	53	89	104	21	1 *5	17	2 *5
410-11496-5	MVD-7/8 TP/1531010_508	70	82	100	62	45	66	43
LCS 410-36638/2-A	Lab Control Sample	92	97	104	90	32	85	31
LCSD 410-36638/3-A	Lab Control Sample Dup	85	98	105	80	28	78	27
MB 410-36638/1-A	Method Blank	44	48	50	42	17	43	16

Surrogate Legend

M242FTS = M2-4:2 FTS
M282FTS = M2-8:2 FTS
M262FTS = M2-6:2 FTS
13C5PHA = 13C5 PFHxA
C4PFHA = 13C4 PFHpA
C8PFOA = 13C8 PFOA
C9PFNA = 13C9 PFNA
C6PFDA = 13C6 PFDA
13C7PUA = 13C7 PFUnA
PFDoDA = 13C2-PFDoDA
PFTDA = 13C2 PFTeDA
C3PFBS = 13C3 PFBS
C3PFHS = 13C3 PFHxS
C8PFOS = 13C8 PFOS
d3NMFOS = d3-NMeFOSAA
d5NEFOS = d5-NEtFOSAA
PFOSA = 13C8 FOSA
PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
NMFM = d7-N-MeFOSE-M
d3NMFSA = d3-NMePFOSA

Isotope Dilution Summary

Client: Merrimack Village District
Project/Site: PFC Investigation

Job ID: 410-11496-1

NEFM = d9-N-EtFOSE-M
d5NPFSA = d5-NEtPFOSA

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12

Lab Sample ID: MB 410-36260/1-A
Matrix: Water
Analysis Batch: 36406

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 36260

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
NEtFOSAA	ND		3.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
NMeFOSAA	ND		2.0	0.60	ng/L		08/23/20 10:59	08/24/20 09:17	1
10:2 Fluorotelomer sulfonic acid	ND		5.0	1.0	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluorononanesulfonic acid (PFNS)	ND		2.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluorododecanesulfonic acid (PFDoS)	ND		3.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluorooctanesulfonamide (PFOSA)	ND		2.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	ND		3.0	1.0	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		3.0	1.0	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluorobutanoic acid (PFBA)	ND		5.0	2.0	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluoropentanoic acid (PFPA)	ND		2.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
NMeFOSE	ND		3.0	1.0	ng/L		08/23/20 10:59	08/24/20 09:17	1
NMeFOSA	ND		3.0	1.0	ng/L		08/23/20 10:59	08/24/20 09:17	1
NEtFOSE	ND		3.0	1.0	ng/L		08/23/20 10:59	08/24/20 09:17	1
NEtFOSA	ND		5.0	1.0	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
4:2 Fluorotelomer sulfonic acid	ND		2.0	0.50	ng/L		08/23/20 10:59	08/24/20 09:17	1
6:2 Fluorotelomer sulfonic acid	ND		5.0	2.0	ng/L		08/23/20 10:59	08/24/20 09:17	1
8:2 Fluorotelomer sulfonic acid	ND		3.0	1.0	ng/L		08/23/20 10:59	08/24/20 09:17	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*117*		*22 - 169*	*08/23/20 10:59*	*08/24/20 09:17*	*1*
M2-8:2 FTS	*116*		*37 - 169*	*08/23/20 10:59*	*08/24/20 09:17*	*1*
M2-6:2 FTS	*122*		*29 - 182*	*08/23/20 10:59*	*08/24/20 09:17*	*1*
13C5 PFHxA	*111*		*36 - 137*	*08/23/20 10:59*	*08/24/20 09:17*	*1*
13C4 PFHpA	*105*		*33 - 140*	*08/23/20 10:59*	*08/24/20 09:17*	*1*
13C8 PFOA	*113*		*52 - 124*	*08/23/20 10:59*	*08/24/20 09:17*	*1*
13C9 PFNA	*102*		*48 - 130*	*08/23/20 10:59*	*08/24/20 09:17*	*1*
13C6 PFDA	*113*		*50 - 124*	*08/23/20 10:59*	*08/24/20 09:17*	*1*
13C7 PFUnA	*111*		*44 - 128*	*08/23/20 10:59*	*08/24/20 09:17*	*1*
13C2-PFDoDA	*112*		*36 - 127*	*08/23/20 10:59*	*08/24/20 09:17*	*1*
13C2 PFTeDA	*103*		*21 - 134*	*08/23/20 10:59*	*08/24/20 09:17*	*1*

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12 (Continued)

Lab Sample ID: MB 410-36260/1-A
Matrix: Water
Analysis Batch: 36406

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 36260

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFBS	99		23 - 175	08/23/20 10:59	08/24/20 09:17	1
13C3 PFHxS	109		35 - 143	08/23/20 10:59	08/24/20 09:17	1
13C8 PFOS	102		52 - 121	08/23/20 10:59	08/24/20 09:17	1
d3-NMeFOSAA	108		36 - 143	08/23/20 10:59	08/24/20 09:17	1
d5-NEtFOSAA	109		42 - 149	08/23/20 10:59	08/24/20 09:17	1
13C8 FOSA	98		10 - 134	08/23/20 10:59	08/24/20 09:17	1
13C4 PFBA	102		43 - 130	08/23/20 10:59	08/24/20 09:17	1
13C5 PFPeA	100		38 - 150	08/23/20 10:59	08/24/20 09:17	1
d7-N-MeFOSE-M	94		10 - 137	08/23/20 10:59	08/24/20 09:17	1
d3-NMePFOSA	73		10 - 107	08/23/20 10:59	08/24/20 09:17	1
d9-N-EtFOSE-M	98		10 - 135	08/23/20 10:59	08/24/20 09:17	1
d5-NEtPFOSA	77		10 - 107	08/23/20 10:59	08/24/20 09:17	1

Lab Sample ID: LCS 410-36260/2-A
Matrix: Water
Analysis Batch: 36406

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 36260

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorohexanoic acid (PFHxA)	25.6	25.5		ng/L		100	66 - 137
Perfluoroheptanoic acid (PFHpA)	25.6	27.4		ng/L		107	66 - 141
Perfluorooctanoic acid (PFOA)	25.6	25.0		ng/L		98	65 - 136
Perfluorononanoic acid (PFNA)	25.6	25.1		ng/L		98	65 - 140
Perfluorodecanoic acid (PFDA)	25.6	26.3		ng/L		103	63 - 137
Perfluorotridecanoic acid (PFTrDA)	25.6	27.0		ng/L		105	58 - 146
Perfluorotetradecanoic acid (PFTeA)	25.6	26.2		ng/L		102	64 - 141
Perfluorobutanesulfonic acid (PFBS)	22.6	21.6		ng/L		95	65 - 132
Perfluorohexanesulfonic acid (PFHxS)	24.2	21.7		ng/L		90	60 - 128
Perfluorooctanesulfonic acid (PFOS)	24.5	21.4		ng/L		87	51 - 126
NEtFOSAA	25.6	23.6		ng/L		92	54 - 134
NMeFOSAA	25.6	28.1		ng/L		110	58 - 143
10:2 Fluorotelomer sulfonic acid	24.7	29.5		ng/L		120	44 - 141
Perfluoropentanesulfonic acid (PFPeS)	24.0	24.0		ng/L		100	71 - 136
Perfluoroheptanesulfonic Acid (PFHpS)	24.4	25.3		ng/L		104	67 - 135
Perfluorononanesulfonic acid (PFNS)	24.6	27.3		ng/L		111	67 - 137
Perfluorodecanesulfonic acid (PFDS)	24.7	25.9		ng/L		105	61 - 134
Perfluorododecanesulfonic acid (PFDoS)	24.8	24.7		ng/L		100	54 - 136
Perfluorooctanesulfonamide (PFOSA)	25.6	25.0		ng/L		98	55 - 130
Perfluoro-n-hexadecanoic acid (PFHxDA)	25.6	25.6		ng/L		100	52 - 149
Perfluoro-n-octadecanoic acid (PFODA)	25.6	26.5		ng/L		104	32 - 167

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12 (Continued)

Lab Sample ID: LCS 410-36260/2-A
Matrix: Water
Analysis Batch: 36406

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 36260

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	25.6	25.7		ng/L		101	62 - 156
Perfluoropentanoic acid (PFPA)	25.6	24.6		ng/L		96	72 - 139
NMeFOSE	25.6	22.7		ng/L		89	52 - 131
NMeFOSA	25.6	27.5		ng/L		108	49 - 141
NEtFOSE	25.6	22.3		ng/L		87	49 - 128
NEtFOSA	25.6	24.4		ng/L		95	50 - 136
Perfluorododecanoic acid (PFDoA)	25.6	25.9		ng/L		101	63 - 140
Perfluoroundecanoic acid (PFUnA)	25.6	25.1		ng/L		98	62 - 138
4:2 Fluorotelomer sulfonic acid	23.9	25.7		ng/L		107	59 - 130
6:2 Fluorotelomer sulfonic acid	24.3	26.4		ng/L		109	57 - 137
8:2 Fluorotelomer sulfonic acid	24.5	25.3		ng/L		103	56 - 140

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
M2-4:2 FTS	*103*		*22 - 169*
M2-8:2 FTS	*112*		*37 - 169*
M2-6:2 FTS	*109*		*29 - 182*
13C5 PFHxA	*105*		*36 - 137*
13C4 PFHpA	*100*		*33 - 140*
13C8 PFOA	*105*		*52 - 124*
13C9 PFNA	*109*		*48 - 130*
13C6 PFDA	*109*		*50 - 124*
13C7 PFUnA	*120*		*44 - 128*
13C2-PFDoDA	*123*		*36 - 127*
13C2 PFTeDA	*117*		*21 - 134*
13C3 PFBS	*105*		*23 - 175*
13C3 PFHxS	*104*		*35 - 143*
13C8 PFOS	*109*		*52 - 121*
d3-NMeFOSAA	*111*		*36 - 143*
d5-NEtFOSAA	*125*		*42 - 149*
13C8 FOSA	*97*		*10 - 134*
13C4 PFBA	*108*		*43 - 130*
13C5 PFPeA	*105*		*38 - 150*
d7-N-MeFOSE-M	*91*		*10 - 137*
d3-NMePFOSA	*62*		*10 - 107*
d9-N-EtFOSE-M	*93*		*10 - 135*
d5-NEtPFOSA	*66*		*10 - 107*

Lab Sample ID: LCSD 410-36260/3-A
Matrix: Water
Analysis Batch: 36406

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 36260

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorohexanoic acid (PFHxA)	25.6	26.4		ng/L		103	66 - 137	4	30
Perfluoroheptanoic acid (PFHpA)	25.6	25.9		ng/L		101	66 - 141	5	30
Perfluorooctanoic acid (PFOA)	25.6	25.5		ng/L		100	65 - 136	2	30
Perfluorononanoic acid (PFNA)	25.6	26.7		ng/L		104	65 - 140	6	30
Perfluorodecanoic acid (PFDA)	25.6	24.3		ng/L		95	63 - 137	8	30

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12 (Continued)

Lab Sample ID: LCSD 410-36260/3-A
Matrix: Water
Analysis Batch: 36406

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 36260

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorotridecanoic acid (PFTrDA)			25.6	27.8		ng/L		108	58 - 146	3	30
Perfluorotetradecanoic acid (PFTeA)			25.6	28.1		ng/L		110	64 - 141	7	30
Perfluorobutanesulfonic acid (PFBS)			22.6	21.4		ng/L		94	65 - 132	1	30
Perfluorohexanesulfonic acid (PFHxS)			24.2	21.5		ng/L		89	60 - 128	1	30
Perfluorooctanesulfonic acid (PFOS)			24.5	21.6		ng/L		88	51 - 126	1	30
NEtFOSAA			25.6	25.4		ng/L		99	54 - 134	7	30
NMeFOSAA			25.6	26.2		ng/L		102	58 - 143	7	30
10:2 Fluorotelomer sulfonic acid			24.7	26.7		ng/L		108	44 - 141	10	30
Perfluoropentanesulfonic acid (PFPeS)			24.0	25.2		ng/L		105	71 - 136	5	30
Perfluoroheptanesulfonic Acid (PFHpS)			24.4	25.0		ng/L		103	67 - 135	1	30
Perfluorononanesulfonic acid (PFNS)			24.6	29.0		ng/L		118	67 - 137	6	30
Perfluorodecanesulfonic acid (PFDS)			24.7	25.5		ng/L		103	61 - 134	2	30
Perfluorododecanesulfonic acid (PFDoS)			24.8	24.1		ng/L		97	54 - 136	3	30
Perfluorooctanesulfonamide (PFOSA)			25.6	25.0		ng/L		98	55 - 130	0	30
Perfluoro-n-hexadecanoic acid (PFHxDA)			25.6	27.5		ng/L		107	52 - 149	7	30
Perfluoro-n-octadecanoic acid (PFODA)			25.6	29.8		ng/L		116	32 - 167	12	30
Perfluorobutanoic acid (PFBA)			25.6	26.9		ng/L		105	62 - 156	4	30
Perfluoropentanoic acid (PFPA)			25.6	26.1		ng/L		102	72 - 139	6	30
NMeFOSE			25.6	24.2		ng/L		95	52 - 131	7	30
NMeFOSA			25.6	28.1		ng/L		110	49 - 141	2	30
NEtFOSE			25.6	21.3		ng/L		83	49 - 128	5	30
NEtFOSA			25.6	26.6		ng/L		104	50 - 136	9	30
Perfluorododecanoic acid (PFDoA)			25.6	25.9		ng/L		101	63 - 140	0	30
Perfluoroundecanoic acid (PFUnA)			25.6	26.2		ng/L		103	62 - 138	4	30
4:2 Fluorotelomer sulfonic acid			23.9	24.3		ng/L		102	59 - 130	6	30
6:2 Fluorotelomer sulfonic acid			24.3	25.4		ng/L		105	57 - 137	4	30
8:2 Fluorotelomer sulfonic acid			24.5	24.6		ng/L		100	56 - 140	3	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
M2-4:2 FTS	*113*		*22 - 169*
M2-8:2 FTS	*109*		*37 - 169*
M2-6:2 FTS	*115*		*29 - 182*
13C5 PFHxA	*109*		*36 - 137*
13C4 PFHpA	*107*		*33 - 140*
13C8 PFOA	*104*		*52 - 124*
13C9 PFNA	*100*		*48 - 130*
13C6 PFDA	*101*		*50 - 124*

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12 (Continued)

Lab Sample ID: LCSD 410-36260/3-A
Matrix: Water
Analysis Batch: 36406

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 36260

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C7 PFUnA	*107*		*44 - 128*
13C2-PFDoDA	*104*		*36 - 127*
13C2 PFTeDA	*97*		*21 - 134*
13C3 PFBS	*103*		*23 - 175*
13C3 PFHxS	*105*		*35 - 143*
13C8 PFOS	*100*		*52 - 121*
d3-NMeFOSAA	*107*		*36 - 143*
d5-NEtFOSAA	*108*		*42 - 149*
13C8 FOSA	*95*		*10 - 134*
13C4 PFBA	*106*		*43 - 130*
13C5 PFPeA	*104*		*38 - 150*
d7-N-MeFOSE-M	*86*		*10 - 137*
d3-NMePFOSA	*65*		*10 - 107*
d9-N-EtFOSE-M	*93*		*10 - 135*
d5-NEtPFOSA	*68*		*10 - 107*

Lab Sample ID: MB 410-36638/1-A
Matrix: Water
Analysis Batch: 38474

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 36638

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
NEtFOSAA	ND		3.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
NMeFOSAA	ND		2.0	0.60	ng/L		08/24/20 17:26	08/28/20 15:56	1
10:2 Fluorotelomer sulfonic acid	ND		5.0	1.0	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluoropentanesulfonic acid (PFPeS)	ND		2.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluorononanesulfonic acid (PFNS)	ND		2.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluorododecanesulfonic acid (PFDoS)	ND		3.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluorooctanesulfonamide (PFOSA)	ND		2.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluoro-n-hexadecanoic acid (PFHxDA)	ND		3.0	1.0	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluoro-n-octadecanoic acid (PFODA)	ND		3.0	1.0	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluorobutanoic acid (PFBA)	ND		5.0	2.0	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluoropentanoic acid (PFPA)	ND		2.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
NMeFOSE	ND		3.0	1.0	ng/L		08/24/20 17:26	08/28/20 15:56	1

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12 (Continued)

Lab Sample ID: MB 410-36638/1-A
Matrix: Water
Analysis Batch: 38474

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 36638

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
NMeFOSA	ND		3.0	1.0	ng/L		08/24/20 17:26	08/28/20 15:56	1
NEtFOSE	ND		3.0	1.0	ng/L		08/24/20 17:26	08/28/20 15:56	1
NEtFOSA	ND		5.0	1.0	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
4:2 Fluorotelomer sulfonic acid	ND		2.0	0.50	ng/L		08/24/20 17:26	08/28/20 15:56	1
6:2 Fluorotelomer sulfonic acid	ND		5.0	2.0	ng/L		08/24/20 17:26	08/28/20 15:56	1
8:2 Fluorotelomer sulfonic acid	ND		3.0	1.0	ng/L		08/24/20 17:26	08/28/20 15:56	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-4:2 FTS	*52*		*20 - 187*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
M2-8:2 FTS	*58*		*34 - 182*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
M2-6:2 FTS	*55*		*29 - 189*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
13C5 PFHxA	*49*		*31 - 142*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
13C4 PFHpA	*46*		*30 - 144*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
13C8 PFOA	*50*		*49 - 127*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
13C9 PFNA	*48*		*47 - 136*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
13C6 PFDA	*50*		*47 - 128*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
13C7 PFUnA	*56*		*40 - 135*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
13C2-PFDoDA	*58*		*28 - 136*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
13C2 PFTeDA	*50*		*10 - 144*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
13C3 PFBS	*50*		*19 - 178*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
13C3 PFHxS	*50*		*32 - 145*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
13C8 PFOS	*50*		*49 - 126*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
d3-NMeFOSAA	*57*		*32 - 151*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
d5-NEtFOSAA	*68*		*37 - 164*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
13C8 FOSA	*44*		*10 - 143*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
13C4 PFBA	*48*		*41 - 132*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
13C5 PFPeA	*50*		*33 - 155*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
d7-N-MeFOSE-M	*42*		*10 - 143*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
d3-NMePFOSA	*17*		*10 - 107*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
d9-N-EtFOSE-M	*43*		*10 - 142*	*08/24/20 17:26*	*08/28/20 15:56*	*1*
d5-NEtPFOSA	*16*		*10 - 108*	*08/24/20 17:26*	*08/28/20 15:56*	*1*

Lab Sample ID: LCS 410-36638/2-A
Matrix: Water
Analysis Batch: 37548

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 36638

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorohexanoic acid (PFHxA)	25.6	23.7		ng/L		93	66 - 137
Perfluoroheptanoic acid (PFHpA)	25.6	26.5		ng/L		103	66 - 141
Perfluorooctanoic acid (PFOA)	25.6	25.1		ng/L		98	65 - 136
Perfluorononanoic acid (PFNA)	25.6	24.2		ng/L		94	65 - 140
Perfluorodecanoic acid (PFDA)	25.6	24.9		ng/L		97	63 - 137
Perfluorotridecanoic acid (PFTrDA)	25.6	25.7		ng/L		101	58 - 146
Perfluorotetradecanoic acid (PFTeA)	25.6	27.3		ng/L		107	64 - 141
Perfluorobutanesulfonic acid (PFBS)	22.6	21.6		ng/L		95	65 - 132

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12 (Continued)

Lab Sample ID: LCS 410-36638/2-A
Matrix: Water
Analysis Batch: 37548

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 36638

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorohexanesulfonic acid (PFHxS)	24.2	22.7		ng/L		94	60 - 128
Perfluorooctanesulfonic acid (PFOS)	24.5	21.0		ng/L		86	51 - 126
NEtFOSAA	25.6	26.7		ng/L		104	54 - 134
NMeFOSAA	25.6	27.5		ng/L		108	58 - 143
10:2 Fluorotelomer sulfonic acid	24.7	26.0		ng/L		105	44 - 141
Perfluoropentanesulfonic acid (PFPeS)	24.0	25.5		ng/L		106	71 - 136
Perfluoroheptanesulfonic Acid (PFHpS)	24.4	25.3		ng/L		104	67 - 135
Perfluorononanesulfonic acid (PFNS)	24.6	26.3		ng/L		107	67 - 137
Perfluorodecanesulfonic acid (PFDS)	24.7	24.1		ng/L		98	61 - 134
Perfluorododecanesulfonic acid (PFDoS)	24.8	22.5		ng/L		91	54 - 136
Perfluorooctanesulfonamide (PFOSA)	25.6	24.8		ng/L		97	55 - 130
Perfluoro-n-hexadecanoic acid (PFHxDA)	25.6	28.4		ng/L		111	52 - 149
Perfluoro-n-octadecanoic acid (PFODA)	25.6	26.0		ng/L		102	32 - 167
Perfluorobutanoic acid (PFBA)	25.6	24.8		ng/L		97	62 - 156
Perfluoropentanoic acid (PFPA)	25.6	24.7		ng/L		96	72 - 139
NMeFOSE	25.6	24.1		ng/L		94	52 - 131
NMeFOSA	25.6	27.6		ng/L		108	49 - 141
NEtFOSE	25.6	24.0		ng/L		94	49 - 128
NEtFOSA	25.6	25.3		ng/L		99	50 - 136
Perfluorododecanoic acid (PFDoA)	25.6	25.7		ng/L		100	63 - 140
Perfluoroundecanoic acid (PFUnA)	25.6	24.7		ng/L		96	62 - 138
4:2 Fluorotelomer sulfonic acid	23.9	21.8		ng/L		91	59 - 130
6:2 Fluorotelomer sulfonic acid	24.3	22.8		ng/L		94	57 - 137
8:2 Fluorotelomer sulfonic acid	24.5	26.2		ng/L		107	56 - 140

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
M2-4:2 FTS	*108*		*20 - 187*
M2-8:2 FTS	*108*		*34 - 182*
M2-6:2 FTS	*112*		*29 - 189*
13C5 PFHxA	*101*		*31 - 142*
13C4 PFHpA	*92*		*30 - 144*
13C8 PFOA	*95*		*49 - 127*
13C9 PFNA	*100*		*47 - 136*
13C6 PFDA	*98*		*47 - 128*
13C7 PFUnA	*102*		*40 - 135*
13C2-PFDoDA	*101*		*28 - 136*
13C2 PFTeDA	*86*		*10 - 144*
13C3 PFBS	*96*		*19 - 178*
13C3 PFHxS	*93*		*32 - 145*
13C8 PFOS	*96*		*49 - 126*

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12 (Continued)

Lab Sample ID: LCS 410-36638/2-A
Matrix: Water
Analysis Batch: 37548

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 36638

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
d3-NMeFOSAA	*105*		*32 - 151*
d5-NEtFOSAA	*113*		*37 - 164*
13C8 FOSA	*92*		*10 - 143*
13C4 PFBA	*97*		*41 - 132*
13C5 PFPeA	*104*		*33 - 155*
d7-N-MeFOSE-M	*90*		*10 - 143*
d3-NMePFOSA	*32*		*10 - 107*
d9-N-EtFOSE-M	*85*		*10 - 142*
d5-NEtPFOSA	*31*		*10 - 108*

Lab Sample ID: LCSD 410-36638/3-A
Matrix: Water
Analysis Batch: 37548

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 36638

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorohexanoic acid (PFHxA)			25.6	24.2		ng/L		95	66 - 137	2	30
Perfluoroheptanoic acid (PFHpA)			25.6	25.4		ng/L		99	66 - 141	4	30
Perfluorooctanoic acid (PFOA)			25.6	23.9		ng/L		93	65 - 136	5	30
Perfluorononanoic acid (PFNA)			25.6	26.0		ng/L		101	65 - 140	7	30
Perfluorodecanoic acid (PFDA)			25.6	25.1		ng/L		98	63 - 137	1	30
Perfluorotridecanoic acid (PFTrDA)			25.6	25.8		ng/L		101	58 - 146	0	30
Perfluorotetradecanoic acid (PFTeA)			25.6	26.5		ng/L		104	64 - 141	3	30
Perfluorobutanesulfonic acid (PFBS)			22.6	21.6		ng/L		95	65 - 132	0	30
Perfluorohexanesulfonic acid (PFHxS)			24.2	21.9		ng/L		91	60 - 128	3	30
Perfluorooctanesulfonic acid (PFOS)			24.5	24.8		ng/L		101	51 - 126	17	30
NEtFOSAA			25.6	25.9		ng/L		101	54 - 134	3	30
NMeFOSAA			25.6	27.4		ng/L		107	58 - 143	0	30
10:2 Fluorotelomer sulfonic acid			24.7	24.4		ng/L		99	44 - 141	6	30
Perfluoropentanesulfonic acid (PFPeS)			24.0	25.0		ng/L		104	71 - 136	2	30
Perfluoroheptanesulfonic Acid (PFHpS)			24.4	24.7		ng/L		101	67 - 135	3	30
Perfluorononanesulfonic acid (PFNS)			24.6	27.1		ng/L		110	67 - 137	3	30
Perfluorodecanesulfonic acid (PFDS)			24.7	25.3		ng/L		102	61 - 134	5	30
Perfluorododecanesulfonic acid (PFDoS)			24.8	23.1		ng/L		93	54 - 136	2	30
Perfluorooctanesulfonamide (PFOSA)			25.6	26.0		ng/L		102	55 - 130	5	30
Perfluoro-n-hexadecanoic acid (PFHxDA)			25.6	29.3		ng/L		114	52 - 149	3	30
Perfluoro-n-octadecanoic acid (PFODA)			25.6	28.7		ng/L		112	32 - 167	10	30
Perfluorobutanoic acid (PFBA)			25.6	25.0		ng/L		98	62 - 156	1	30
Perfluoropentanoic acid (PFPA)			25.6	24.9		ng/L		97	72 - 139	1	30
NMeFOSE			25.6	23.7		ng/L		93	52 - 131	2	30

Method: T-WI14355 r12 - SOP T-PFAS-WI14355 Rev.12 (Continued)

Lab Sample ID: LCSD 410-36638/3-A
Matrix: Water
Analysis Batch: 37548

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 36638

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
NMeFOSA			25.6	25.9		ng/L		101	49 - 141	6	30
NEtFOSE			25.6	24.0		ng/L		94	49 - 128	0	30
NEtFOSA			25.6	25.3		ng/L		99	50 - 136	0	30
Perfluorododecanoic acid (PFDoA)			25.6	25.8		ng/L		101	63 - 140	0	30
Perfluoroundecanoic acid (PFUnA)			25.6	25.8		ng/L		101	62 - 138	4	30
4:2 Fluorotelomer sulfonic acid			23.9	23.8		ng/L		99	59 - 130	9	30
6:2 Fluorotelomer sulfonic acid			24.3	22.7		ng/L		94	57 - 137	1	30
8:2 Fluorotelomer sulfonic acid			24.5	24.9		ng/L		102	56 - 140	5	30

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
M2-4:2 FTS	*106*		*20 - 187*
M2-8:2 FTS	*109*		*34 - 182*
M2-6:2 FTS	*113*		*29 - 189*
13C5 PFHxA	*98*		*31 - 142*
13C4 PFHpA	*92*		*30 - 144*
13C8 PFOA	*96*		*49 - 127*
13C9 PFNA	*98*		*47 - 136*
13C6 PFDA	*96*		*47 - 128*
13C7 PFUnA	*97*		*40 - 135*
13C2-PFDoDA	*95*		*28 - 136*
13C2 PFTeDA	*85*		*10 - 144*
13C3 PFBS	*103*		*19 - 178*
13C3 PFHxS	*92*		*32 - 145*
13C8 PFOS	*95*		*49 - 126*
d3-NMeFOSAA	*105*		*32 - 151*
d5-NEtFOSAA	*105*		*37 - 164*
13C8 FOSA	*85*		*10 - 143*
13C4 PFBA	*98*		*41 - 132*
13C5 PFPeA	*105*		*33 - 155*
d7-N-MeFOSE-M	*80*		*10 - 143*
d3-NMePFOSA	*28*		*10 - 107*
d9-N-EtFOSE-M	*78*		*10 - 142*
d5-NEtPFOSA	*27*		*10 - 108*

LCMS

Prep Batch: 36260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-11496-1	MVD-2(T)/1531010_008	Total/NA	Water	T-WI14355 r12	
410-11496-2	MVD-3(T)/1531010_003	Total/NA	Water	T-WI14355 r12	
410-11496-3	MVD-7(R)/1531010_007	Total/NA	Water	T-WI14355 r12	
410-11496-4 - RE	MVD-8(R)/1531010_009	Total/NA	Water	T-WI14355 r12	
410-11496-5	MVD-7/8 TP/1531010_508	Total/NA	Water	T-WI14355 r12	
MB 410-36260/1-A	Method Blank	Total/NA	Water	T-WI14355 r12	
LCS 410-36260/2-A	Lab Control Sample	Total/NA	Water	T-WI14355 r12	
LCSD 410-36260/3-A	Lab Control Sample Dup	Total/NA	Water	T-WI14355 r12	

Analysis Batch: 36269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-11496-1	MVD-2(T)/1531010_008	Total/NA	Water	T-WI14355 r12	36260
410-11496-2	MVD-3(T)/1531010_003	Total/NA	Water	T-WI14355 r12	36260
410-11496-3	MVD-7(R)/1531010_007	Total/NA	Water	T-WI14355 r12	36260
410-11496-4 - RE	MVD-8(R)/1531010_009	Total/NA	Water	T-WI14355 r12	36260
410-11496-5	MVD-7/8 TP/1531010_508	Total/NA	Water	T-WI14355 r12	36260

Analysis Batch: 36406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-36260/1-A	Method Blank	Total/NA	Water	T-WI14355 r12	36260
LCS 410-36260/2-A	Lab Control Sample	Total/NA	Water	T-WI14355 r12	36260
LCSD 410-36260/3-A	Lab Control Sample Dup	Total/NA	Water	T-WI14355 r12	36260

Prep Batch: 36638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-11496-4	MVD-8(R)/1531010_009	Total/NA	Water	T-WI14355 r12	
MB 410-36638/1-A	Method Blank	Total/NA	Water	T-WI14355 r12	
LCS 410-36638/2-A	Lab Control Sample	Total/NA	Water	T-WI14355 r12	
LCSD 410-36638/3-A	Lab Control Sample Dup	Total/NA	Water	T-WI14355 r12	

Analysis Batch: 37548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-11496-4	MVD-8(R)/1531010_009	Total/NA	Water	T-WI14355 r12	36638
LCS 410-36638/2-A	Lab Control Sample	Total/NA	Water	T-WI14355 r12	36638
LCSD 410-36638/3-A	Lab Control Sample Dup	Total/NA	Water	T-WI14355 r12	36638

Analysis Batch: 38474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-36638/1-A	Method Blank	Total/NA	Water	T-WI14355 r12	36638

Lab Chronicle

Client: Merrimack Village District
Project/Site: PFC Investigation

Job ID: 410-11496-1

Client Sample ID: MVD-2(T)/1531010_008
Lab Sample ID: 410-11496-1
Date Collected: 08/20/20 11:43
Matrix: Water
Date Received: 08/21/20 11:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	T-WI14355 r12			36260	08/23/20 10:59	S7AC	ELLE
Total/NA	Analysis	T-WI14355 r12		1	36269	08/23/20 22:49	UUV6	ELLE

Client Sample ID: MVD-3(T)/1531010_003
Lab Sample ID: 410-11496-2
Date Collected: 08/20/20 10:50
Matrix: Water
Date Received: 08/21/20 11:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	T-WI14355 r12			36260	08/23/20 10:59	S7AC	ELLE
Total/NA	Analysis	T-WI14355 r12		1	36269	08/23/20 22:59	UUV6	ELLE

Client Sample ID: MVD-7(R)/1531010_007
Lab Sample ID: 410-11496-3
Date Collected: 08/20/20 11:13
Matrix: Water
Date Received: 08/21/20 11:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	T-WI14355 r12			36260	08/23/20 10:59	S7AC	ELLE
Total/NA	Analysis	T-WI14355 r12		1	36269	08/23/20 23:09	UUV6	ELLE

Client Sample ID: MVD-8(R)/1531010_009
Lab Sample ID: 410-11496-4
Date Collected: 08/20/20 11:19
Matrix: Water
Date Received: 08/21/20 11:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	T-WI14355 r12	RE		36260	08/23/20 10:59	S7AC	ELLE
Total/NA	Analysis	T-WI14355 r12	RE	1	36269	08/23/20 23:19	UUV6	ELLE
Total/NA	Prep	T-WI14355 r12			36638	08/24/20 17:26	QLP7	ELLE
Total/NA	Analysis	T-WI14355 r12		1	37548	08/27/20 06:18	UUV6	ELLE

Client Sample ID: MVD-7/8 TP/1531010_508
Lab Sample ID: 410-11496-5
Date Collected: 08/20/20 11:25
Matrix: Water
Date Received: 08/21/20 11:03

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	T-WI14355 r12			36260	08/23/20 10:59	S7AC	ELLE
Total/NA	Analysis	T-WI14355 r12		1	36269	08/23/20 23:29	UUV6	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Merrimack Village District
Project/Site: PFC Investigation

Job ID: 410-11496-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

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

Authority	Program	Identification Number	Expiration Date
New Hampshire	NELAP	273019	01-10-21

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
T-WI14355 r12	T-WI14355 r12	Water	10:2 Fluorotelomer sulfonic acid
T-WI14355 r12	T-WI14355 r12	Water	4:2 Fluorotelomer sulfonic acid
T-WI14355 r12	T-WI14355 r12	Water	6:2 Fluorotelomer sulfonic acid
T-WI14355 r12	T-WI14355 r12	Water	8:2 Fluorotelomer sulfonic acid
T-WI14355 r12	T-WI14355 r12	Water	NEtFOSA
T-WI14355 r12	T-WI14355 r12	Water	NEtFOSAA
T-WI14355 r12	T-WI14355 r12	Water	NEtFOSE
T-WI14355 r12	T-WI14355 r12	Water	NMeFOSA
T-WI14355 r12	T-WI14355 r12	Water	NMeFOSAA
T-WI14355 r12	T-WI14355 r12	Water	NMeFOSE
T-WI14355 r12	T-WI14355 r12	Water	Perfluorobutanesulfonic acid (PFBS)
T-WI14355 r12	T-WI14355 r12	Water	Perfluorobutanoic acid (PFBA)
T-WI14355 r12	T-WI14355 r12	Water	Perfluorodecanesulfonic acid (PFDS)
T-WI14355 r12	T-WI14355 r12	Water	Perfluorodecanoic acid (PFDA)
T-WI14355 r12	T-WI14355 r12	Water	Perfluorododecanesulfonic acid (PFDoS)
T-WI14355 r12	T-WI14355 r12	Water	Perfluorododecanoic acid (PFDoA)
T-WI14355 r12	T-WI14355 r12	Water	Perfluoroheptanesulfonic Acid (PFHpS)
T-WI14355 r12	T-WI14355 r12	Water	Perfluoroheptanoic acid (PFHpA)
T-WI14355 r12	T-WI14355 r12	Water	Perfluorohexanesulfonic acid (PFHxS)
T-WI14355 r12	T-WI14355 r12	Water	Perfluorohexanoic acid (PFHxA)
T-WI14355 r12	T-WI14355 r12	Water	Perfluoro-n-hexadecanoic acid (PFHxDA)
T-WI14355 r12	T-WI14355 r12	Water	Perfluoro-n-octadecanoic acid (PFODA)
T-WI14355 r12	T-WI14355 r12	Water	Perfluorononanesulfonic acid (PFNS)
T-WI14355 r12	T-WI14355 r12	Water	Perfluorononanoic acid (PFNA)
T-WI14355 r12	T-WI14355 r12	Water	Perfluorooctanesulfonamide (PFOSA)
T-WI14355 r12	T-WI14355 r12	Water	Perfluorooctanesulfonic acid (PFOS)
T-WI14355 r12	T-WI14355 r12	Water	Perfluorooctanoic acid (PFOA)
T-WI14355 r12	T-WI14355 r12	Water	Perfluoropentanesulfonic acid (PFPeS)
T-WI14355 r12	T-WI14355 r12	Water	Perfluoropentanoic acid (PFPA)
T-WI14355 r12	T-WI14355 r12	Water	Perfluorotetradecanoic acid (PFTeA)
T-WI14355 r12	T-WI14355 r12	Water	Perfluorotridecanoic acid (PFTrDA)
T-WI14355 r12	T-WI14355 r12	Water	Perfluoroundecanoic acid (PFUnA)

Method Summary

Client: Merrimack Village District
Project/Site: PFC Investigation

Job ID: 410-11496-1

Method	Method Description	Protocol	Laboratory
T-WI14355 r12	SOP T-PFAS-WI14355 Rev.12	ELLE - Lancaster	ELLE
T-WI14355 r12	T-PFAS-WI14355 Revision 12	ELLE - Lancaster	ELLE

Protocol References:

ELLE - Lancaster = Eurofins Lancaster, Facility Standard Operating Procedure.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: Merrimack Village District
Project/Site: PFC Investigation

Job ID: 410-11496-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-11496-1	MVD-2(T)/1531010_008	Water	08/20/20 11:43	08/21/20 11:03	
410-11496-2	MVD-3(T)/1531010_003	Water	08/20/20 10:50	08/21/20 11:03	
410-11496-3	MVD-7(R)/1531010_007	Water	08/20/20 11:13	08/21/20 11:03	
410-11496-4	MVD-8(R)/1531010_009	Water	08/20/20 11:19	08/21/20 11:03	
410-11496-5	MVD-7/8 TP/1531010_508	Water	08/20/20 11:25	08/21/20 11:03	

NHDES

Drinking Water and Groundwater Bureau

410-11496 Chain of Custody

October 14, 2019

GENERAL SYSTEM EVALUATION SAMPLES ONLY ***

Questions: (603) 271-2513

PWS ID: 1531010

System Name: MERRIMACK VILLAGE DIST

PWS Town: MERRIMACK

Sample Type: Treatment Evaluation ☐ Other ☒

Collected By: Ronald Miner (Print Name)

Signature: Ronald Miner Jr.

I certify that all samples taken are from the site(s) listed below and all information provided on this form to the lab is valid.

Phone Number:

If sample is chlorinated, please fill in Chlorine Residual (mg/L) column.

Sample Purpose/Comments:

Analysis Requested

Sample Site Location	Date & Time Sample Collected	Lab Sample ID	# of Containers	Parameters Requested	Free/Total (circle one) Chlorine Residual (mg/L)
MVD-2(G)/1531010_008	8-20-20 11:43			PFAS by isotope dilution 32 Compounds	
MVD-3(R)/1531010_003	8-20-20 10:50				
MVD-7(R)/1531010_007	8-20-20 11:13				
MVD-8(R)/1531010_009	8-20-20 11:19				
MVD-TP/1531010_508	8-20-20 11:25				

NOTE: Samples collected for NITRATE/NITRITE analysis NEED to be collected prior to chlorination. Check with Lab.
CYANIDE samples NEED to be collected prior to chlorination. Check with Lab.

*** Samples that are representative of water being consumed, and indicate the presence of acute contaminants exceeding the MCL, shall be used for compliance purposes.

FOR LAB USE: Temp C (upon receipt): 1.0 On Ice? Y / N Batch ID (if different than sample ID prefix): _____ List QUALIFIERS (if any): _____

Relinquished by: Ronald Miner Jr. Received by: _____ Date/Time: _____

Relinquished by: _____ Received at Lab by: Julissa R. Date/Time: 8/21/20 11:03

Lab Conducting Analysis: _____ Signature: _____ Lab Accred. ID: _____ Phone: _____

Reporting Lab (if different): _____ Signature: _____ Lab Accred. ID: _____ Phone: _____

NOTE: If acute contaminants are present/exceeded, results must be reported to DES within 24 hours.

Login Sample Receipt Checklist

Client: Merrimack Village District

Job Number: 410-11496-1

Login Number: 11496
List Number: 1
Creator: Rivera-Santa, Julissa

List Source: Eurofins Lancaster Laboratories Env

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
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	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	N/A	