



REVISED

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Merrimack Village District
2 Greens Pond Road
Merrimack NH 03054

Report Date: February 07, 2020 11:49

Project: PFC Investigation

Account #: 38083
Group Number: 2084712
PO Number: 3332
State of Sample Origin: NH

Electronic Copy To Merrimack Village District

Attn: Jill Lavoie

Respectfully Submitted,



Mary Kate Izzo
Project Manager

(717) 556-4656

A previous version of this report was generated on 02/06/2020 10:27.

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/>. Historical copies may be requested through your project manager.



SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
1531010_008 Grab Water	01/23/2020 11:17	1245966
1531010_003 Grab Water	01/23/2020 11:08	1245967
1531010_007 Grab Water	01/23/2020 10:37	1245968
1531010_009 Grab Water	01/23/2020 10:46	1245969
1531010_508 Grab Water	01/23/2020 10:49	1245970

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: 1531010_008 Grab Water
MVD-2(T)

Merrimack Village District
ELLE Sample #: PW 1245966
ELLE Group #: 2084712
Matrix: Water

Project Name: PFC Investigation

Submission Date/Time: 01/24/2020 11:08
Collection Date/Time: 01/23/2020 11:17

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		T-PFAS-WI14355, Revision 12	ng/l	ng/l	ng/l	
14473	10:2-Fts ¹	120226-60-0	N.D.	0.86	4.3	1
14473	4:2-Fts ¹	757124-72-4	N.D.	0.43	1.7	1
14473	6:2-Fts ¹	27619-97-2	N.D.	1.7	4.3	1
14473	8:2-Fts ¹	39108-34-4	N.D.	0.86	2.6	1
14473	Netfosaa ¹	2991-50-6	N.D.	0.43	2.6	1
NETFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	Netfosa ¹	4151-50-2	N.D.	0.86	4.3	1
NETPFOSA is the acronym for N-ethylperfluoro-1-octanesulfonamide						
14473	NETPFOSAE ¹	1691-99-2	N.D.	0.86	2.6	1
NETPFOSAE is the acronym for 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol						
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.51	1.7	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMePFOSA ¹	31506-32-8	N.D.	0.86	2.6	1
NMePFOSA is the acronym for N-methylperfluoro-1-octanesulfonamide						
14473	NMePFOSAE ¹	24448-09-7	N.D.	0.86	2.6	1
NMePFOSAE is the acronym for 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol						
14473	Perfluoropentanesulfonate ¹	2706-91-4	N.D.	0.43	1.7	1
14473	PFBA ¹	375-22-4	3.4 J	1.7	4.3	1
14473	PFBS ¹	375-73-5	2.9	0.43	1.7	1
14473	PFDA ¹	335-76-2	N.D.	0.43	1.7	1
14473	Pfdoda ¹	307-55-1	N.D.	0.43	1.7	1
14473	Pfdods ¹	79780-39-5	N.D.	0.43	2.6	1
14473	PFDS ¹	335-77-3	N.D.	0.43	1.7	1
14473	Pfhpa ¹	375-85-9	3.7	0.43	1.7	1
14473	Pfhps ¹	375-92-8	N.D.	0.43	1.7	1
14473	Pfhxa ¹	307-24-4	6.4	0.43	1.7	1
14473	Pfhxda ¹	67905-19-5	N.D.	0.86	2.6	1
14473	Pfhxs ¹	355-46-4	0.93 J	0.43	1.7	1
14473	PFNA ¹	375-95-1	0.69 J	0.43	1.7	1
14473	PFNS ¹	68259-12-1	N.D.	0.43	1.7	1
14473	PFOA ¹	335-67-1	16	0.43	1.7	1
14473	Pfoda ¹	16517-11-6	N.D.	0.86	2.6	1
14473	PFOS ¹	1763-23-1	2.0	0.43	1.7	1
14473	Pfosa ¹	754-91-6	N.D.	0.43	1.7	1
14473	PFPA ¹	2706-90-3	4.8	0.43	1.7	1
14473	Pfteda ¹	376-06-7	N.D.	0.43	1.7	1
14473	Pftrda ¹	72629-94-8	N.D.	0.43	1.7	1
14473	Pfunda ¹	2058-94-8	N.D.	0.43	1.7	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 1531010_008 Grab Water
MVD-2(T)

Merrimack Village District
ELLE Sample #: PW 1245966
ELLE Group #: 2084712
Matrix: Water

Project Name: PFC Investigation

Submittal Date/Time: 01/24/2020 11:08
Collection Date/Time: 01/23/2020 11:17

Sample Comments

¹ = This analyte was not on the laboratory's NH ELAP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	T-PFAS-WI14355, Revision 12	1	20029002	01/30/2020 21:51	Jason W Knight	1
14091	PFAS Water Prep	T-PFAS-WI14355, Revision 12	1	20029002	01/29/2020 07:00	Toby Barnhart	1

*=This limit was used in the evaluation of the final result

Sample Description: 1531010_003 Grab Water
MVD-3(T)

Merrimack Village District
ELLE Sample #: PW 1245967
ELLE Group #: 2084712
Matrix: Water

Project Name: PFC Investigation

Submission Date/Time: 01/24/2020 11:08
Collection Date/Time: 01/23/2020 11:08

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	LC/MS/MS Miscellaneous	T-PFAS-WI14355, Revision 12	ng/l	ng/l	ng/l	
14473	10:2-Fts ¹	120226-60-0	N.D.	0.86	4.3	1
14473	4:2-Fts ¹	757124-72-4	N.D.	0.43	1.7	1
14473	6:2-Fts ¹	27619-97-2	N.D.	1.7	4.3	1
14473	8:2-Fts ¹	39108-34-4	N.D.	0.86	2.6	1
14473	Netfosaa ¹	2991-50-6	N.D.	0.43	2.6	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	Netfosa ¹	4151-50-2	N.D.	0.86	4.3	1
	NEtPFOSA is the acronym for N-ethylperfluoro-1-octanesulfonamide					
14473	NEtPFOSAE ¹	1691-99-2	N.D.	0.86	2.6	1
	NEtPFOSAE is the acronym for 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol					
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.51	1.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMePFOSA ¹	31506-32-8	N.D.	0.86	2.6	1
	NMePFOSA is the acronym for N-methylperfluoro-1-octanesulfonamide					
14473	NMePFOSAE ¹	24448-09-7	N.D.	0.86	2.6	1
	NMePFOSAE is the acronym for 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol					
14473	Perfluoropentanesulfonate ¹	2706-91-4	N.D.	0.43	1.7	1
14473	PFBA ¹	375-22-4	5.4	1.7	4.3	1
14473	PFBS ¹	375-73-5	4.1	0.43	1.7	1
14473	PFDA ¹	335-76-2	N.D.	0.43	1.7	1
14473	Pfdoda ¹	307-55-1	N.D.	0.43	1.7	1
14473	Pfdods ¹	79780-39-5	N.D.	0.43	2.6	1
14473	PFDS ¹	335-77-3	N.D.	0.43	1.7	1
14473	Pfhpa ¹	375-85-9	4.7	0.43	1.7	1
14473	Pfhps ¹	375-92-8	N.D.	0.43	1.7	1
14473	Pfhxa ¹	307-24-4	7.6	0.43	1.7	1
14473	Pfhxda ¹	67905-19-5	N.D.	0.86	2.6	1
14473	Pfhxs ¹	355-46-4	0.58 J	0.43	1.7	1
14473	PFNA ¹	375-95-1	0.77 J	0.43	1.7	1
14473	PFNS ¹	68259-12-1	N.D.	0.43	1.7	1
14473	PFOA ¹	335-67-1	22	0.43	1.7	1
14473	Pfoda ¹	16517-11-6	N.D.	0.86	2.6	1
14473	PFOS ¹	1763-23-1	1.7	0.43	1.7	1
14473	Pfosa ¹	754-91-6	N.D.	0.43	1.7	1
14473	PFPA ¹	2706-90-3	7.0	0.43	1.7	1
14473	Pfteda ¹	376-06-7	N.D.	0.43	1.7	1
14473	Pftrda ¹	72629-94-8	N.D.	0.43	1.7	1
14473	Pfunda ¹	2058-94-8	N.D.	0.43	1.7	1

The recovery for extraction standards is outside of the QC acceptance limits as noted on the QC Summary. The following

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 1531010_003 Grab Water
MVD-3(T)

Merrimack Village District
ELLE Sample #: PW 1245967
ELLE Group #: 2084712
Matrix: Water

Project Name: PFC Investigation

Submittal Date/Time: 01/24/2020 11:08
Collection Date/Time: 01/23/2020 11:08

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	action was taken: The sample was re-extracted within the method holding time and the recovery for extraction standards was again outside of the QC acceptance limits.					

Sample Comments

¹ = This analyte was not on the laboratory's NH ELAP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	T-PFAS-WI14355, Revision 12	1	20029002	01/30/2020 22:00	Jason W Knight	1
14091	PFAS Water Prep	T-PFAS-WI14355, Revision 12	1	20029002	01/29/2020 07:00	Toby Barnhart	1

*=This limit was used in the evaluation of the final result

Sample Description: 1531010_007 Grab Water
MVD-7(R)

Merrimack Village District
ELLE Sample #: PW 1245968
ELLE Group #: 2084712
Matrix: Water

Project Name: PFC Investigation

Submission Date/Time: 01/24/2020 11:08
Collection Date/Time: 01/23/2020 10:37

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	LC/MS/MS Miscellaneous	T-PFAS-WI14355, Revision 12	ng/l	ng/l	ng/l	
14473	10:2-Fts ¹	120226-60-0	N.D.	0.84	4.2	1
14473	4:2-Fts ¹	757124-72-4	N.D.	0.42	1.7	1
14473	6:2-Fts ¹	27619-97-2	N.D.	1.7	4.2	1
14473	8:2-Fts ¹	39108-34-4	N.D.	0.84	2.5	1
14473	Netfosaa ¹	2991-50-6	N.D.	0.42	2.5	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	Netfosa ¹	4151-50-2	N.D.	0.84	4.2	1
	NEtPFOSA is the acronym for N-ethylperfluoro-1-octanesulfonamide					
14473	NEtPFOSAE ¹	1691-99-2	N.D.	0.84	2.5	1
	NEtPFOSAE is the acronym for 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol					
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.50	1.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMePFOSA ¹	31506-32-8	2.2 J	0.84	2.5	1
	NMePFOSA is the acronym for N-methylperfluoro-1-octanesulfonamide					
14473	NMePFOSAE ¹	24448-09-7	N.D.	0.84	2.5	1
	NMePFOSAE is the acronym for 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol					
14473	Perfluoropentanesulfonate ¹	2706-91-4	N.D.	0.42	1.7	1
14473	PFBA ¹	375-22-4	2.5 J	1.7	4.2	1
14473	PFBS ¹	375-73-5	1.8	0.42	1.7	1
14473	PFDA ¹	335-76-2	N.D.	0.42	1.7	1
14473	Pfdoda ¹	307-55-1	N.D.	0.42	1.7	1
14473	Pfdods ¹	79780-39-5	N.D.	0.42	2.5	1
14473	PFDS ¹	335-77-3	N.D.	0.42	1.7	1
14473	Pfhpa ¹	375-85-9	2.6	0.42	1.7	1
14473	Pfhps ¹	375-92-8	N.D.	0.42	1.7	1
14473	Pfhxa ¹	307-24-4	2.3	0.42	1.7	1
14473	Pfhxda ¹	67905-19-5	N.D.	0.84	2.5	1
14473	Pfhxs ¹	355-46-4	1.1 J	0.42	1.7	1
14473	PFNA ¹	375-95-1	0.59 J	0.42	1.7	1
14473	PFNS ¹	68259-12-1	N.D.	0.42	1.7	1
14473	PFOA ¹	335-67-1	23	0.42	1.7	1
14473	Pfoda ¹	16517-11-6	N.D.	0.84	2.5	1
14473	PFOS ¹	1763-23-1	2.5	0.42	1.7	1
14473	Pfosa ¹	754-91-6	N.D.	0.42	1.7	1
14473	PFPA ¹	2706-90-3	2.0	0.42	1.7	1
14473	Pfteda ¹	376-06-7	N.D.	0.42	1.7	1
14473	Pftrda ¹	72629-94-8	N.D.	0.42	1.7	1
14473	Pfunda ¹	2058-94-8	N.D.	0.42	1.7	1

The recovery for extraction standards is outside of the QC acceptance limits as noted on the QC Summary. The following

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 1531010_007 Grab Water
MVD-7(R)

Merrimack Village District
ELLE Sample #: PW 1245968
ELLE Group #: 2084712
Matrix: Water

Project Name: PFC Investigation

Submittal Date/Time: 01/24/2020 11:08
Collection Date/Time: 01/23/2020 10:37

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	action was taken: The sample was re-extracted within the method holding time and the recovery for extraction standards was again outside of the QC acceptance limits.					

Sample Comments

¹ = This analyte was not on the laboratory's NH ELAP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	T-PFAS-WI14355, Revision 12	1	20029002	01/30/2020 22:09	Jason W Knight	1
14091	PFAS Water Prep	T-PFAS-WI14355, Revision 12	1	20029002	01/29/2020 07:00	Toby Barnhart	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 1531010_009 Grab Water
MVD-8(R)

Merrimack Village District
ELLE Sample #: PW 1245969
ELLE Group #: 2084712
Matrix: Water

Project Name: PFC Investigation

Submission Date/Time: 01/24/2020 11:08
Collection Date/Time: 01/23/2020 10:46

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	LC/MS/MS Miscellaneous	T-PFAS-WI14355, Revision 12	ng/l	ng/l	ng/l	
14473	10:2-Fts ¹	120226-60-0	N.D.	0.85	4.3	1
14473	4:2-Fts ¹	757124-72-4	N.D.	0.43	1.7	1
14473	6:2-Fts ¹	27619-97-2	N.D.	1.7	4.3	1
14473	8:2-Fts ¹	39108-34-4	N.D.	0.85	2.6	1
14473	Netfosaa ¹	2991-50-6	N.D.	0.43	2.6	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	Netfosa ¹	4151-50-2	N.D.	0.85	4.3	1
	NEtPFOSA is the acronym for N-ethylperfluoro-1-octanesulfonamide					
14473	NEtPFOSAE ¹	1691-99-2	N.D.	0.85	2.6	1
	NEtPFOSAE is the acronym for 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol					
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.51	1.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMePFOSA ¹	31506-32-8	N.D.	0.85	2.6	1
	NMePFOSA is the acronym for N-methylperfluoro-1-octanesulfonamide					
14473	NMePFOSAE ¹	24448-09-7	N.D.	0.85	2.6	1
	NMePFOSAE is the acronym for 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol					
14473	Perfluoropentanesulfonate ¹	2706-91-4	N.D.	0.43	1.7	1
14473	PFBA ¹	375-22-4	1.9 J	1.7	4.3	1
14473	PFBS ¹	375-73-5	1.5 J	0.43	1.7	1
14473	PFDA ¹	335-76-2	N.D.	0.43	1.7	1
14473	Pfdoda ¹	307-55-1	N.D.	0.43	1.7	1
14473	Pfdods ¹	79780-39-5	N.D.	0.43	2.6	1
14473	PFDS ¹	335-77-3	N.D.	0.43	1.7	1
14473	Pfhpa ¹	375-85-9	2.0	0.43	1.7	1
14473	Pfhps ¹	375-92-8	N.D.	0.43	1.7	1
14473	Pfhxa ¹	307-24-4	2.2	0.43	1.7	1
14473	Pfhxda ¹	67905-19-5	N.D.	0.85	2.6	1
14473	Pfhxs ¹	355-46-4	1.0 J	0.43	1.7	1
14473	PFNA ¹	375-95-1	N.D.	0.43	1.7	1
14473	PFNS ¹	68259-12-1	N.D.	0.43	1.7	1
14473	PFOA ¹	335-67-1	17	0.43	1.7	1
14473	Pfoda ¹	16517-11-6	N.D.	0.85	2.6	1
14473	PFOS ¹	1763-23-1	1.3 J	0.43	1.7	1
14473	Pfosa ¹	754-91-6	N.D.	0.43	1.7	1
14473	PFPA ¹	2706-90-3	1.8	0.43	1.7	1
14473	Pfteda ¹	376-06-7	N.D.	0.43	1.7	1
14473	Pftrda ¹	72629-94-8	N.D.	0.43	1.7	1
14473	Pfunda ¹	2058-94-8	N.D.	0.43	1.7	1

The recovery for extraction standards is outside of the QC acceptance limits as noted on the QC Summary. The following

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 1531010_009 Grab Water
MVD-8(R)

Merrimack Village District
ELLE Sample #: PW 1245969
ELLE Group #: 2084712
Matrix: Water

Project Name: PFC Investigation

Submittal Date/Time: 01/24/2020 11:08
Collection Date/Time: 01/23/2020 10:46

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	action was taken: The sample was re-extracted within the method holding time and the recovery for extraction standards was again outside of the QC acceptance limits.					

Sample Comments

¹ = This analyte was not on the laboratory's NH ELAP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	T-PFAS-WI14355, Revision 12	1	20029002	01/30/2020 22:18	Jason W Knight	1
14091	PFAS Water Prep	T-PFAS-WI14355, Revision 12	1	20029002	01/29/2020 07:00	Toby Barnhart	1

*=This limit was used in the evaluation of the final result

Sample Description: 1531010_508 Grab Water
MVD-TP

Merrimack Village District
ELLE Sample #: PW 1245970
ELLE Group #: 2084712
Matrix: Water

Project Name: PFC Investigation

Submission Date/Time: 01/24/2020 11:08
Collection Date/Time: 01/23/2020 10:49

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	LC/MS/MS Miscellaneous	T-PFAS-WI14355, Revision 12	ng/l	ng/l	ng/l	
14473	10:2-Fts ¹	120226-60-0	N.D.	0.87	4.3	1
14473	4:2-Fts ¹	757124-72-4	N.D.	0.43	1.7	1
14473	6:2-Fts ¹	27619-97-2	N.D.	1.7	4.3	1
14473	8:2-Fts ¹	39108-34-4	N.D.	0.87	2.6	1
14473	Netfosaa ¹	2991-50-6	N.D.	0.43	2.6	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	Netfosa ¹	4151-50-2	N.D.	0.87	4.3	1
	NEtPFOSA is the acronym for N-ethylperfluoro-1-octanesulfonamide					
14473	NEtPFOSAE ¹	1691-99-2	N.D.	0.87	2.6	1
	NEtPFOSAE is the acronym for 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol					
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.52	1.7	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMePFOSA ¹	31506-32-8	N.D.	0.87	2.6	1
	NMePFOSA is the acronym for N-methylperfluoro-1-octanesulfonamide					
14473	NMePFOSAE ¹	24448-09-7	N.D.	0.87	2.6	1
	NMePFOSAE is the acronym for 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol					
14473	Perfluoropentanesulfonate ¹	2706-91-4	N.D.	0.43	1.7	1
14473	PFBA ¹	375-22-4	1.8 J	1.7	4.3	1
14473	PFBS ¹	375-73-5	1.6 J	0.43	1.7	1
14473	PFDA ¹	335-76-2	N.D.	0.43	1.7	1
14473	Pfdoda ¹	307-55-1	N.D.	0.43	1.7	1
14473	Pfdods ¹	79780-39-5	N.D.	0.43	2.6	1
14473	PFDS ¹	335-77-3	N.D.	0.43	1.7	1
14473	Pfhpa ¹	375-85-9	2.5	0.43	1.7	1
14473	Pfhps ¹	375-92-8	N.D.	0.43	1.7	1
14473	Pfhxa ¹	307-24-4	2.4	0.43	1.7	1
14473	Pfhxda ¹	67905-19-5	N.D.	0.87	2.6	1
14473	Pfhxs ¹	355-46-4	1.2 J	0.43	1.7	1
14473	PFNA ¹	375-95-1	0.47 J	0.43	1.7	1
14473	PFNS ¹	68259-12-1	N.D.	0.43	1.7	1
14473	PFOA ¹	335-67-1	18	0.43	1.7	1
14473	Pfoda ¹	16517-11-6	N.D.	0.87	2.6	1
14473	PFOS ¹	1763-23-1	2.0	0.43	1.7	1
14473	Pfosa ¹	754-91-6	N.D.	0.43	1.7	1
14473	PFPA ¹	2706-90-3	1.8	0.43	1.7	1
14473	Pfteda ¹	376-06-7	N.D.	0.43	1.7	1
14473	Pftrda ¹	72629-94-8	N.D.	0.43	1.7	1
14473	Pfunda ¹	2058-94-8	N.D.	0.43	1.7	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: 1531010_508 Grab Water
MVD-TP

Merrimack Village District
ELLE Sample #: PW 1245970
ELLE Group #: 2084712
Matrix: Water

Project Name: PFC Investigation

Submittal Date/Time: 01/24/2020 11:08
Collection Date/Time: 01/23/2020 10:49

Sample Comments

¹ = This analyte was not on the laboratory's NH ELAP Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	PFAS in Water by LC/MS/MS	T-PFAS-WI14355, Revision 12	1	20029002	01/30/2020 22:27	Jason W Knight	1
14091	PFAS Water Prep	T-PFAS-WI14355, Revision 12	1	20029002	01/29/2020 07:00	Toby Barnhart	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Merrimack Village District
Reported: 02/07/2020 11:49

Group Number: 2084712

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ng/l	ng/l	ng/l
Batch number: 20029002	Sample number(s): 1245966-1245970		
10:2-Fts	N.D.	1.0	5.0
4:2-Fts	N.D.	0.50	2.0
6:2-Fts	N.D.	2.0	5.0
8:2-Fts	N.D.	1.0	3.0
Netfosaa	N.D.	0.50	3.0
Netpfosa	N.D.	1.0	5.0
NETPFOSAE	N.D.	1.0	3.0
NMeFOSAA	N.D.	0.60	2.0
NMePFOSA	N.D.	1.0	3.0
NMePFOSAE	N.D.	1.0	3.0
Perfluoropentanesulfonate	N.D.	0.50	2.0
PFBA	N.D.	2.0	5.0
PFBS	N.D.	0.50	2.0
PFDA	N.D.	0.50	2.0
Pfdoda	N.D.	0.50	2.0
Pfdods	N.D.	0.50	3.0
PFDS	N.D.	0.50	2.0
Pfhpa	N.D.	0.50	2.0
Pfhps	N.D.	0.50	2.0
Pfhxa	N.D.	0.50	2.0
Pfhxda	N.D.	1.0	3.0
Pfhxs	N.D.	0.50	2.0
PFNA	N.D.	0.50	2.0
PFNS	N.D.	0.50	2.0
PFOA	N.D.	0.50	2.0
Pfoda	N.D.	1.0	3.0
PFOS	N.D.	0.50	2.0
Pfosa	N.D.	0.50	2.0
PFPA	N.D.	0.50	2.0
Pfteda	N.D.	0.50	2.0
Pftrda	N.D.	0.50	2.0
Pfunda	N.D.	0.50	2.0

LCS/LCSD

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Merrimack Village District
Reported: 02/07/2020 11:49

Group Number: 2084712

LCS/LCSD

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 20029002	Sample number(s): 1245966-1245970								
10:2-Fts	24.68	20.85	24.68	23.43	84	95	45-143	12	30
4:2-Fts	23.92	24.35	23.92	21.05	102	88	61-131	15	30
6:2-Fts	24.28	22.46	24.28	25.04	93	103	56-140	11	30
8:2-Fts	24.52	21.19	24.52	25.68	86	105	58-143	19	30
Netfosaa	25.6	26.47	25.6	27.33	103	107	53-140	3	30
Netpfosa	25.6	26.09	25.6	27.22	102	106	56-136	4	30
NEtPFOSAE	25.6	22.04	25.6	23.94	86	93	56-130	8	30
NMeFOSAA	25.6	24.55	25.6	25.47	96	99	59-141	4	30
NMePFOSA	25.6	24.74	25.6	26.76	97	105	49-134	8	30
NMePFOSAE	25.6	23.86	25.6	24.48	93	96	61-133	3	30
Perfluoropentanesulfonate	24	23.74	24	25.23	99	105	73-134	6	30
PFBA	25.6	24.67	25.6	24.65	96	96	63-160	0	30
PFBS	22.64	21.74	22.64	22	96	97	67-135	1	30
PFDA	25.6	22.66	25.6	23.58	89	92	66-141	4	30
Pfdoda	25.6	22.41	25.6	24.94	88	97	65-143	11	30
Pfdods	24.8	22.68	24.8	24.32	91	98	57-134	7	30
PFDS	24.64	23.22	24.64	26.21	94	106	62-135	12	30
Pfhpa	25.6	22.8	25.6	26.09	89	102	69-144	13	30
Pfhps	24.36	21.42	24.36	23.43	88	96	67-138	9	30
Pfhxa	25.6	22.8	25.6	23.94	89	94	69-139	5	30
Pfhxda	25.6	27.93	25.6	27.64	109	108	60-148	1	30
Pfhxs	24.2	21.8	24.2	22.67	90	94	63-132	4	30
PFNA	25.6	24.71	25.6	26.96	97	105	66-144	9	30
PFNS	24.56	23.42	24.56	25.59	95	104	70-137	9	30
PFOA	25.6	24.13	25.6	25.62	94	100	67-139	6	30
Pfoda	25.6	33.41	25.6	29.18	131	114	47-159	14	30
PFOS	24.48	21.05	24.48	20.24	86	83	53-129	4	30
Pfosa	25.6	21.17	25.6	25.78	83	101	67-126	20	30
PFPA	25.6	23.82	25.6	25.69	93	100	73-135	8	30
Pfteda	25.6	23.01	25.6	27.52	90	107	69-141	18	30
Pftrda	25.6	24.27	25.6	25.7	95	100	66-146	6	30
Pfunda	25.6	25.32	25.6	27.13	99	106	66-140	7	30

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Merrimack Village District
Reported: 02/07/2020 11:49

Group Number: 2084712

Labeled Isotope Quality Control

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Water by LC/MS/MS
Batch number: 20029002

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C2-4:2-FTS	13C5-PFHxA	13C3-PFHxS
1245966	74	81	81	79	66	69
1245967	82	96	102	99	80	77
1245968	88	102	104	117	92	91
1245969	80	90	93	105	77	79
1245970	67	74	80	81	64	65
Blank	72	73	72	67	71	73
LCS	72	77	74	69	74	76
LCSD	88	88	85	87	97	94
Limits:	43-130	38-150	23-175	22-169	36-137	35-143

	13C4-PFHpA	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA
1245966	69	83	76	75	72	81
1245967	82	90	77	84	84	88
1245968	92	103	85	86	92	88
1245969	83	88	80	84	82	89
1245970	67	78	69	72	75	74
Blank	70	78	73	75	70	77
LCS	77	84	76	73	75	79
LCSD	90	96	90	90	88	95
Limits:	33-140	29-182	52-124	52-121	48-130	50-124

	13C2-8:2-FTS	d3-NMeFOSAA	13C7-PFUnDA	d5-NEIFOSAA	13C2-PFDoDA	13C2-PFTeDA
1245966	88	75	82	79	73	76
1245967	94	83	87	84	84	78
1245968	93	68	88	89	79	76
1245969	101	80	89	89	82	87
1245970	80	70	74	68	72	74
Blank	85	73	84	82	75	76
LCS	85	72	76	70	73	76
LCSD	96	89	88	84	88	88
Limits:	37-169	36-143	44-128	42-149	36-127	21-134

	13C8-PFOSA	d7-NMePFOSAE	d3-NMePFOSA	d9-NEIPFOSAE	d5-NEIPFOSA
1245966	71	60	26	61	22
1245967	77	49	9*	48	9*
1245968	62	14	1*	13	1*
1245969	65	21	3*	19	2*
1245970	70	45	12	43	10

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Merrimack Village District
Reported: 02/07/2020 11:49

Group Number: 2084712

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: PFAS in Water by LC/MS/MS
Batch number: 20029002

	13C8-PFOSA	d7-NMePFOSAE	d3-NMePFOSA	d9-NEiPFOSAE	d5-NEiPFOSA
Blank	70	58	30	60	28
LCS	72	67	36	63	35
LCSD	80	74	40	73	41
Limits:	10-134	10-137	10-107	10-135	10-107

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

38083/2084712/1245966-70



Drinking Water and Groundwater Bureau

October 14, 2019

Page 1 of 1

GENERAL SYSTEM EVALUATION SAMPLES ONLY ***

Questions: (603) 271-2513

PWS ID: 1531010

Collected By: Ronald Miner

System Name: MERRIMACK VILLAGE DIST

Signature: Ronald Miner
(Print Name)

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.

PWS Town: MERRIMACK

Phone Number: (603) 424-9241 x107

Sample Type: Treatment Evaluation Other

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	1/23/20 11:17		2	PFA5 by isotope dilution 32 Compounds	
MVD-3(G)/1531010-003	1/23/20 11:08		2		
MVD-7(R)/1531010-007	1/23/20 10:37		2		
MVD-8(R)/1531010-009	1/23/20 10:46		2		
MVD-TP/1531010-508	1/23/20 10:49		2		

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): 4.7 On Ice? Y / N Batch ID (if different than sample ID prefix): _____ List QUALIFIERS (if any): _____

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

Relinquished by: _____ Received at Lab by: [Signature] Date/Time: 1/23/20 11:08

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.



Client: NHDES

Delivery and Receipt Information

Delivery Method: Fed Ex Arrival Date: 01/24/2020
 Number of Packages: 1 Number of Projects: 1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	0
Samples Chilled:	Yes	Air Quality Samples Present:	No
Paperwork Enclosed:	Yes		
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Julissa Rivera-Santa

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.*

<u>Cooler #</u>	<u>Thermometer ID</u>	<u>Corrected Temp</u>	<u>Therm. Type</u>	<u>Ice Type</u>	<u>Ice Present?</u>	<u>Ice Container</u>	<u>Elevated Temp?</u>
1	192050133	4.7	IR	Wet	Y	Bagged	N

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

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

Tests 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.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
P^	Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.