



## ANALYSIS REPORT

Prepared by:

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Prepared for:

Merrimack Village District  
2 Greens Pond Road  
Merrimack NH 03054

Report Date: July 09, 2019 15:14

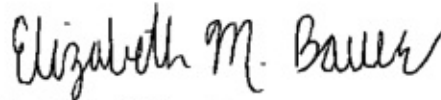
### Project: PFC Investigation

Account #: 38083  
Group Number: 2049200  
PO Number: 1531010  
State of Sample Origin: NH

Electronic Copy To Merrimack Village District

Attn: Jill Lavoie

Respectfully Submitted,



Elizabeth M. Bauer  
Project Manager

(717) 556-7290

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### SAMPLE INFORMATION

| <u>Client Sample Description</u> | <u>Sample Collection<br/>Date/Time</u> | <u>ELLE#</u> |
|----------------------------------|--|--------------|
| 1531010_008 Grab Water           | 06/14/2019 09:30                       | 1081921      |
| 1531010_003 Grab Water           | 06/14/2019 10:57                       | 1081922      |
| 1531010_007 Grab Water           | 06/14/2019 10:15                       | 1081923      |
| 1531010_009 Grab Water           | 06/14/2019 10:20                       | 1081924      |
| 1531010_508 Grab Water           | 06/14/2019 10:30                       | 1081925      |

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

**Sample Description:** 1531010\_008 Grab Water  
PFC Investigation

Merrimack Village District  
ELLE Sample #: PW 1081921  
ELLE Group #: 2049200  
Matrix: Water

**Project Name:** PFC Investigation

Submittal Date/Time: 06/15/2019 09:30  
Collection Date/Time: 06/14/2019 09:30

| CAT No.   | Analysis Name  | CAS Number  | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|---|--|-------------|--------|-------------------------|-----------------------|-----------------|
| LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified |  |             | ng/l   | ng/l                    | ng/l                  |                 |
| 14473   | 10:2Fluorotelomersulfonic acid <sup>1</sup>                                    | 120226-60-0 | N.D.   | 0.87                    | 2.6                   | 1               |
| 14473   | 4:2-Fluorotelomersulfonic acid <sup>1</sup>                                    | 757124-72-4 | N.D.   | 0.87                    | 2.6                   | 1               |
| 14473   | 6:2-Fluorotelomersulfonic acid <sup>1</sup>                                    | 27619-97-2  | N.D.   | 0.87                    | 1.7                   | 1               |
| 14473   | 8:2-Fluorotelomersulfonic acid <sup>1</sup>                                    | 39108-34-4  | N.D.   | 1.7                     | 5.2                   | 1               |
| 14473   | NEtFOSAA   | 2991-50-6   | N.D.   | 0.87                    | 2.6                   | 1               |
|   | NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.     |             |        |                         |                       |                 |
| 14473   | NEtPFOSA <sup>1</sup>  | 4151-50-2   | N.D.   | 2.6                     | 7.8                   | 1               |
|   | NEtPFOSA is the acronym for N-ethylperfluoro-1-octanesulfonamide               |             |        |                         |                       |                 |
| 14473   | NEtPFOSAE <sup>1</sup>   | 1691-99-2   | N.D.   | 1.0                     | 2.6                   | 1               |
|   | NEtPFOSAE is the acronym for 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol  |             |        |                         |                       |                 |
| 14473   | NMeFOSAA   | 2355-31-9   | N.D.   | 0.87                    | 2.6                   | 1               |
|   | NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.    |             |        |                         |                       |                 |
| 14473   | NMePFOSA <sup>1</sup>  | 31506-32-8  | N.D.   | 2.6                     | 7.8                   | 1               |
|   | NMePFOSA is the acronym for N-methylperfluoro-1-octanesulfonamide              |             |        |                         |                       |                 |
| 14473   | NMePFOSAE <sup>1</sup>   | 24448-09-7  | N.D.   | 0.87                    | 2.6                   | 1               |
|   | NMePFOSAE is the acronym for 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol |             |        |                         |                       |                 |
| 14473   | Perfluorobutanesulfonic acid   | 375-73-5    | 2.2    | 0.26                    | 0.87                  | 1               |
| 14473   | Perfluorobutanoic acid <sup>1</sup>  | 375-22-4    | N.D.   | 1.7                     | 5.2                   | 1               |
| 14473   | Perfluorodecanesulfonic acid <sup>1</sup>                                      | 335-77-3    | N.D.   | 0.52                    | 1.7                   | 1               |
| 14473   | Perfluorodecanoic acid   | 335-76-2    | N.D.   | 0.78                    | 1.7                   | 1               |
| 14473   | Perfluorododecanesulfonic acid <sup>1</sup>                                    | 79780-39-5  | N.D.   | 0.26                    | 0.87                  | 1               |
| 14473   | Perfluorododecanoic acid   | 307-55-1    | N.D.   | 0.43                    | 1.7                   | 1               |
| 14473   | Perfluoroheptanesulfonic acid <sup>1</sup>                                     | 375-92-8    | N.D.   | 0.35                    | 1.7                   | 1               |
| 14473   | Perfluoroheptanoic acid  | 375-85-9    | 1.7    | 0.35                    | 0.87                  | 1               |
| 14473   | Perfluorohexadecanoic acid <sup>1</sup>  | 67905-19-5  | N.D.   | 0.26                    | 0.87                  | 1               |
| 14473   | Perfluorohexanesulfonic acid   | 355-46-4    | 0.82 J | 0.35                    | 1.7                   | 1               |
| 14473   | Perfluorohexanoic acid   | 307-24-4    | 2.0    | 0.35                    | 1.7                   | 1               |
| 14473   | Perfluorononanesulfonic acid <sup>1</sup>                                      | 68259-12-1  | N.D.   | 0.52                    | 1.7                   | 1               |
| 14473   | Perfluorononanoic acid   | 375-95-1    | N.D.   | 0.35                    | 1.7                   | 1               |
| 14473   | Perfluorooctadecanoic acid <sup>1</sup>  | 16517-11-6  | N.D.   | 0.43                    | 1.7                   | 1               |
| 14473   | Perfluorooctanesulfonamide <sup>1</sup>  | 754-91-6    | N.D.   | 0.43                    | 2.6                   | 1               |
| 14473   | Perfluorooctanesulfonic acid   | 1763-23-1   | 1.6 J  | 0.35                    | 1.7                   | 1               |
| 14473   | Perfluorooctanoic acid   | 335-67-1    | 9.9    | 0.26                    | 0.87                  | 1               |
| 14473   | Perfluoropentanesulfonate <sup>1</sup>   | 2706-91-4   | N.D.   | 0.35                    | 1.7                   | 1               |
| 14473   | Perfluoropentanoic acid <sup>1</sup>   | 2706-90-3   | N.D.   | 1.7                     | 5.2                   | 1               |
| 14473   | Perfluorotetradecanoic acid  | 376-06-7    | N.D.   | 0.26                    | 0.87                  | 1               |
| 14473   | Perfluorotridecanoic acid  | 72629-94-8  | N.D.   | 0.35                    | 0.87                  | 1               |
| 14473   | Perfluoroundecanoic acid   | 2058-94-8   | N.D.   | 0.35                    | 1.7                   | 1               |

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

**Sample Description:** 1531010\_008 Grab Water  
PFC Investigation

Merrimack Village District  
**ELLE Sample #:** PW 1081921  
**ELLE Group #:** 2049200  
**Matrix:** Water

**Project Name:** PFC Investigation

**Submittal Date/Time:** 06/15/2019 09:30  
**Collection Date/Time:** 06/14/2019 09:30

### Sample Comments

<sup>1</sup> = 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   | 32 PFAS         | EPA 537 Version 1.1 Modified | 1      | 19176002 | 06/27/2019 04:24       | Jason W Knight   | 1               |
| 14091   | PFAS Water Prep | EPA 537 Version 1.1 Modified | 1      | 19176002 | 06/25/2019 09:10       | Courtney J Fatta | 1               |

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

**Sample Description:** 1531010\_003 Grab Water  
PFC Investigation

Merrimack Village District  
**ELLE Sample #:** PW 1081922  
**ELLE Group #:** 2049200  
**Matrix:** Water

**Project Name:** PFC Investigation

**Submission Date/Time:** 06/15/2019 09:30  
**Collection Date/Time:** 06/14/2019 10:57

| CAT No.  | Analysis Name                               | CAS Number                   | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|--|---|------------------------------|--------|-------------------------|-----------------------|-----------------|
| LC/MS/MS Miscellaneous   |   | EPA 537 Version 1.1 Modified | ng/l   | ng/l                    | ng/l                  |                 |
| 14473  | 10:2Fluorotelomersulfonic acid <sup>1</sup> | 120226-60-0                  | N.D.   | 0.88                    | 2.7                   | 1               |
| 14473  | 4:2-Fluorotelomersulfonic acid <sup>1</sup> | 757124-72-4                  | N.D.   | 0.88                    | 2.7                   | 1               |
| 14473  | 6:2-Fluorotelomersulfonic acid <sup>1</sup> | 27619-97-2                   | N.D.   | 0.88                    | 1.8                   | 1               |
| 14473  | 8:2-Fluorotelomersulfonic acid <sup>1</sup> | 39108-34-4                   | N.D.   | 1.8                     | 5.3                   | 1               |
| 14473  | NEtFOSAA                                    | 2991-50-6                    | N.D.   | 0.88                    | 2.7                   | 1               |
| NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.     |   |                              |        |                         |                       |                 |
| 14473  | NEtPFOSA <sup>1</sup>                       | 4151-50-2                    | N.D.   | 2.7                     | 8.0                   | 1               |
| NEtPFOSA is the acronym for N-ethylperfluoro-1-octanesulfonamide               |   |                              |        |                         |                       |                 |
| 14473  | NEtPFOSAE <sup>1</sup>                      | 1691-99-2                    | N.D.   | 1.1                     | 2.7                   | 1               |
| NEtPFOSAE is the acronym for 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol  |   |                              |        |                         |                       |                 |
| 14473  | NMeFOSAA                                    | 2355-31-9                    | N.D.   | 0.88                    | 2.7                   | 1               |
| NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.    |   |                              |        |                         |                       |                 |
| 14473  | NMePFOSA <sup>1</sup>                       | 31506-32-8                   | N.D.   | 2.7                     | 8.0                   | 1               |
| NMePFOSA is the acronym for N-methylperfluoro-1-octanesulfonamide              |   |                              |        |                         |                       |                 |
| 14473  | NMePFOSAE <sup>1</sup>                      | 24448-09-7                   | N.D.   | 0.88                    | 2.7                   | 1               |
| NMePFOSAE is the acronym for 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol |   |                              |        |                         |                       |                 |
| 14473  | Perfluorobutanesulfonic acid                | 375-73-5                     | 5.6    | 0.27                    | 0.88                  | 1               |
| 14473  | Perfluorobutanoic acid <sup>1</sup>         | 375-22-4                     | 6.5    | 1.8                     | 5.3                   | 1               |
| 14473  | Perfluorodecanesulfonic acid <sup>1</sup>   | 335-77-3                     | N.D.   | 0.53                    | 1.8                   | 1               |
| 14473  | Perfluorodecanoic acid                      | 335-76-2                     | N.D.   | 0.80                    | 1.8                   | 1               |
| 14473  | Perfluorododecanesulfonic acid <sup>1</sup> | 79780-39-5                   | N.D.   | 0.27                    | 0.88                  | 1               |
| 14473  | Perfluorododecanoic acid                    | 307-55-1                     | N.D.   | 0.44                    | 1.8                   | 1               |
| 14473  | Perfluoroheptanesulfonic acid <sup>1</sup>  | 375-92-8                     | N.D.   | 0.35                    | 1.8                   | 1               |
| 14473  | Perfluoroheptanoic acid                     | 375-85-9                     | 7.3    | 0.35                    | 0.88                  | 1               |
| 14473  | Perfluorohexadecanoic acid <sup>1</sup>     | 67905-19-5                   | N.D.   | 0.27                    | 0.88                  | 1               |
| 14473  | Perfluorohexanesulfonic acid                | 355-46-4                     | 0.78 J | 0.35                    | 1.8                   | 1               |
| 14473  | Perfluorohexanoic acid                      | 307-24-4                     | 11     | 0.35                    | 1.8                   | 1               |
| 14473  | Perfluorononanesulfonic acid <sup>1</sup>   | 68259-12-1                   | N.D.   | 0.53                    | 1.8                   | 1               |
| 14473  | Perfluorononanoic acid                      | 375-95-1                     | 0.94 J | 0.35                    | 1.8                   | 1               |
| 14473  | Perfluorooctadecanoic acid <sup>1</sup>     | 16517-11-6                   | N.D.   | 0.44                    | 1.8                   | 1               |
| 14473  | Perfluorooctanesulfonamide <sup>1</sup>     | 754-91-6                     | N.D.   | 0.44                    | 2.7                   | 1               |
| 14473  | Perfluorooctanesulfonic acid                | 1763-23-1                    | 2.8    | 0.35                    | 1.8                   | 1               |
| 14473  | Perfluorooctanoic acid                      | 335-67-1                     | 30     | 0.27                    | 0.88                  | 1               |
| 14473  | Perfluoropentanesulfonate <sup>1</sup>      | 2706-91-4                    | 0.39 J | 0.35                    | 1.8                   | 1               |
| 14473  | Perfluoropentanoic acid <sup>1</sup>        | 2706-90-3                    | 8.2    | 1.8                     | 5.3                   | 1               |
| 14473  | Perfluorotetradecanoic acid                 | 376-06-7                     | N.D.   | 0.27                    | 0.88                  | 1               |
| 14473  | Perfluorotridecanoic acid                   | 72629-94-8                   | N.D.   | 0.35                    | 0.88                  | 1               |
| 14473  | Perfluoroundecanoic acid                    | 2058-94-8                    | N.D.   | 0.35                    | 1.8                   | 1               |

The recovery for extraction standard 13C2-4:2-FTS is outside of QC acceptance limits as noted on the QC Summary.

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

**Sample Description:** 1531010\_003 Grab Water  
PFC Investigation

Merrimack Village District  
**ELLE Sample #:** PW 1081922  
**ELLE Group #:** 2049200  
**Matrix:** Water

**Project Name:** PFC Investigation

**Submittal Date/Time:** 06/15/2019 09:30  
**Collection Date/Time:** 06/14/2019 10:57

### Sample Comments

<sup>1</sup> = 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   | 32 PFAS         | EPA 537 Version 1.1 Modified | 1      | 19176002 | 06/27/2019 04:42       | Jason W Knight   | 1               |
| 14091   | PFAS Water Prep | EPA 537 Version 1.1 Modified | 1      | 19176002 | 06/25/2019 09:10       | Courtney J Fatta | 1               |

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

**Sample Description:** 1531010\_007 Grab Water  
PFC Investigation

Merrimack Village District  
**ELLE Sample #:** PW 1081923  
**ELLE Group #:** 2049200  
**Matrix:** Water

**Project Name:** PFC Investigation

**Submission Date/Time:** 06/15/2019 09:30  
**Collection Date/Time:** 06/14/2019 10:15

| CAT No.  | Analysis Name                               | CAS Number                   | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|--|---|------------------------------|--------|-------------------------|-----------------------|-----------------|
| LC/MS/MS Miscellaneous   |   | EPA 537 Version 1.1 Modified | ng/l   | ng/l                    | ng/l                  |                 |
| 14473  | 10:2Fluorotelomersulfonic acid <sup>1</sup> | 120226-60-0                  | N.D.   | 0.87                    | 2.6                   | 1               |
| 14473  | 4:2-Fluorotelomersulfonic acid <sup>1</sup> | 757124-72-4                  | N.D.   | 0.87                    | 2.6                   | 1               |
| 14473  | 6:2-Fluorotelomersulfonic acid <sup>1</sup> | 27619-97-2                   | N.D.   | 0.87                    | 1.7                   | 1               |
| 14473  | 8:2-Fluorotelomersulfonic acid <sup>1</sup> | 39108-34-4                   | N.D.   | 1.7                     | 5.2                   | 1               |
| 14473  | NEtFOSAA                                    | 2991-50-6                    | N.D.   | 0.87                    | 2.6                   | 1               |
| NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.     |   |                              |        |                         |                       |                 |
| 14473  | NEtPFOSA <sup>1</sup>                       | 4151-50-2                    | N.D.   | 2.6                     | 7.8                   | 1               |
| NEtPFOSA is the acronym for N-ethylperfluoro-1-octanesulfonamide               |   |                              |        |                         |                       |                 |
| 14473  | NEtPFOSAE <sup>1</sup>                      | 1691-99-2                    | N.D.   | 1.0                     | 2.6                   | 1               |
| NEtPFOSAE is the acronym for 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol  |   |                              |        |                         |                       |                 |
| 14473  | NMeFOSAA                                    | 2355-31-9                    | N.D.   | 0.87                    | 2.6                   | 1               |
| NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.    |   |                              |        |                         |                       |                 |
| 14473  | NMePFOSA <sup>1</sup>                       | 31506-32-8                   | N.D.   | 2.6                     | 7.8                   | 1               |
| NMePFOSA is the acronym for N-methylperfluoro-1-octanesulfonamide              |   |                              |        |                         |                       |                 |
| 14473  | NMePFOSAE <sup>1</sup>                      | 24448-09-7                   | N.D.   | 0.87                    | 2.6                   | 1               |
| NMePFOSAE is the acronym for 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol |   |                              |        |                         |                       |                 |
| 14473  | Perfluorobutanesulfonic acid                | 375-73-5                     | 1.7    | 0.26                    | 0.87                  | 1               |
| 14473  | Perfluorobutanoic acid <sup>1</sup>         | 375-22-4                     | 2.3 J  | 1.7                     | 5.2                   | 1               |
| 14473  | Perfluorodecanesulfonic acid <sup>1</sup>   | 335-77-3                     | N.D.   | 0.52                    | 1.7                   | 1               |
| 14473  | Perfluorodecanoic acid                      | 335-76-2                     | N.D.   | 0.78                    | 1.7                   | 1               |
| 14473  | Perfluorododecanesulfonic acid <sup>1</sup> | 79780-39-5                   | N.D.   | 0.26                    | 0.87                  | 1               |
| 14473  | Perfluorododecanoic acid                    | 307-55-1                     | N.D.   | 0.43                    | 1.7                   | 1               |
| 14473  | Perfluoroheptanesulfonic acid <sup>1</sup>  | 375-92-8                     | N.D.   | 0.35                    | 1.7                   | 1               |
| 14473  | Perfluoroheptanoic acid                     | 375-85-9                     | 3.1    | 0.35                    | 0.87                  | 1               |
| 14473  | Perfluorohexadecanoic acid <sup>1</sup>     | 67905-19-5                   | N.D.   | 0.26                    | 0.87                  | 1               |
| 14473  | Perfluorohexanesulfonic acid                | 355-46-4                     | 1.4 J  | 0.35                    | 1.7                   | 1               |
| 14473  | Perfluorohexanoic acid                      | 307-24-4                     | 2.4    | 0.35                    | 1.7                   | 1               |
| 14473  | Perfluorononanesulfonic acid <sup>1</sup>   | 68259-12-1                   | N.D.   | 0.52                    | 1.7                   | 1               |
| 14473  | Perfluorononanoic acid                      | 375-95-1                     | 0.71 J | 0.35                    | 1.7                   | 1               |
| 14473  | Perfluorooctadecanoic acid <sup>1</sup>     | 16517-11-6                   | N.D.   | 0.43                    | 1.7                   | 1               |
| 14473  | Perfluorooctanesulfonamide <sup>1</sup>     | 754-91-6                     | N.D.   | 0.43                    | 2.6                   | 1               |
| 14473  | Perfluorooctanesulfonic acid                | 1763-23-1                    | 3.0    | 0.35                    | 1.7                   | 1               |
| 14473  | Perfluorooctanoic acid                      | 335-67-1                     | 23     | 0.26                    | 0.87                  | 1               |
| 14473  | Perfluoropentanesulfonate <sup>1</sup>      | 2706-91-4                    | 0.44 J | 0.35                    | 1.7                   | 1               |
| 14473  | Perfluoropentanoic acid <sup>1</sup>        | 2706-90-3                    | 1.8 J  | 1.7                     | 5.2                   | 1               |
| 14473  | Perfluorotetradecanoic acid                 | 376-06-7                     | N.D.   | 0.26                    | 0.87                  | 1               |
| 14473  | Perfluorotridecanoic acid                   | 72629-94-8                   | N.D.   | 0.35                    | 0.87                  | 1               |
| 14473  | Perfluoroundecanoic acid                    | 2058-94-8                    | N.D.   | 0.35                    | 1.7                   | 1               |

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

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

**Sample Description:** 1531010\_007 Grab Water  
PFC Investigation

Merrimack Village District  
**ELLE Sample #:** PW 1081923  
**ELLE Group #:** 2049200  
**Matrix:** Water

**Project Name:** PFC Investigation

**Submittal Date/Time:** 06/15/2019 09:30  
**Collection Date/Time:** 06/14/2019 10:15

| CAT No. | Analysis Name  | CAS Number | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|---------|--|------------|--------|-------------------------|-----------------------|-----------------|
|         | corrective action was taken: This sample was re-extracted within the method holding time and the recovery for the extraction standards was outside of QC acceptance limits. The data is reported from the initial trial of the sample. |            |        |                         |                       |                 |

### Sample Comments

<sup>1</sup> = 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   | 32 PFAS         | EPA 537 Version 1.1 Modified | 1      | 19176002 | 06/27/2019 04:51       | Christine E Dolman | 1               |
| 14091   | PFAS Water Prep | EPA 537 Version 1.1 Modified | 1      | 19176002 | 06/25/2019 09:10       | Courtney J Fatta   | 1               |

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



**Sample Description:** 1531010\_009 Grab Water  
PFC Investigation

Merrimack Village District  
ELLE Sample #: PW 1081924  
ELLE Group #: 2049200  
Matrix: Water

**Project Name:** PFC Investigation

Submittal Date/Time: 06/15/2019 09:30  
Collection Date/Time: 06/14/2019 10:20

| CAT No.  | Analysis Name                               | CAS Number                   | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|--|---|------------------------------|--------|-------------------------|-----------------------|-----------------|
| LC/MS/MS Miscellaneous   |   | EPA 537 Version 1.1 Modified | ng/l   | ng/l                    | ng/l                  |                 |
| 14473  | 10:2Fluorotelomersulfonic acid <sup>1</sup> | 120226-60-0                  | N.D.   | 0.86                    | 2.6                   | 1               |
| 14473  | 4:2-Fluorotelomersulfonic acid <sup>1</sup> | 757124-72-4                  | N.D.   | 0.86                    | 2.6                   | 1               |
| 14473  | 6:2-Fluorotelomersulfonic acid <sup>1</sup> | 27619-97-2                   | N.D.   | 0.86                    | 1.7                   | 1               |
| 14473  | 8:2-Fluorotelomersulfonic acid <sup>1</sup> | 39108-34-4                   | N.D.   | 1.7                     | 5.2                   | 1               |
| 14473  | NEtFOSAA                                    | 2991-50-6                    | N.D.   | 0.86                    | 2.6                   | 1               |
| NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.     |   |                              |        |                         |                       |                 |
| 14473  | NEtPFOSA <sup>1</sup>                       | 4151-50-2                    | N.D.   | 2.6                     | 7.8                   | 1               |
| NEtPFOSA is the acronym for N-ethylperfluoro-1-octanesulfonamide               |   |                              |        |                         |                       |                 |
| 14473  | NEtPFOSAE <sup>1</sup>                      | 1691-99-2                    | N.D.   | 1.0                     | 2.6                   | 1               |
| NEtPFOSAE is the acronym for 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol  |   |                              |        |                         |                       |                 |
| 14473  | NMeFOSAA                                    | 2355-31-9                    | N.D.   | 0.86                    | 2.6                   | 1               |
| NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.    |   |                              |        |                         |                       |                 |
| 14473  | NMePFOSA <sup>1</sup>                       | 31506-32-8                   | N.D.   | 2.6                     | 7.8                   | 1               |
| NMePFOSA is the acronym for N-methylperfluoro-1-octanesulfonamide              |   |                              |        |                         |                       |                 |
| 14473  | NMePFOSAE <sup>1</sup>                      | 24448-09-7                   | N.D.   | 0.86                    | 2.6                   | 1               |
| NMePFOSAE is the acronym for 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol |   |                              |        |                         |                       |                 |
| 14473  | Perfluorobutanesulfonic acid                | 375-73-5                     | 1.5    | 0.26                    | 0.86                  | 1               |
| 14473  | Perfluorobutanoic acid <sup>1</sup>         | 375-22-4                     | 2.0 J  | 1.7                     | 5.2                   | 1               |
| 14473  | Perfluorodecanesulfonic acid <sup>1</sup>   | 335-77-3                     | N.D.   | 0.52                    | 1.7                   | 1               |
| 14473  | Perfluorodecanoic acid                      | 335-76-2                     | N.D.   | 0.78                    | 1.7                   | 1               |
| 14473  | Perfluorododecanesulfonic acid <sup>1</sup> | 79780-39-5                   | N.D.   | 0.26                    | 0.86                  | 1               |
| 14473  | Perfluorododecanoic acid                    | 307-55-1                     | N.D.   | 0.43                    | 1.7                   | 1               |
| 14473  | Perfluoroheptanesulfonic acid <sup>1</sup>  | 375-92-8                     | N.D.   | 0.35                    | 1.7                   | 1               |
| 14473  | Perfluoroheptanoic acid                     | 375-85-9                     | 2.9    | 0.35                    | 0.86                  | 1               |
| 14473  | Perfluorohexadecanoic acid <sup>1</sup>     | 67905-19-5                   | N.D.   | 0.26                    | 0.86                  | 1               |
| 14473  | Perfluorohexanesulfonic acid                | 355-46-4                     | 1.3 J  | 0.35                    | 1.7                   | 1               |
| 14473  | Perfluorohexanoic acid                      | 307-24-4                     | 2.3    | 0.35                    | 1.7                   | 1               |
| 14473  | Perfluorononanesulfonic acid <sup>1</sup>   | 68259-12-1                   | N.D.   | 0.52                    | 1.7                   | 1               |
| 14473  | Perfluorononanoic acid                      | 375-95-1                     | 0.38 J | 0.35                    | 1.7                   | 1               |
| 14473  | Perfluorooctadecanoic acid <sup>1</sup>     | 16517-11-6                   | N.D.   | 0.43                    | 1.7                   | 1               |
| 14473  | Perfluorooctanesulfonamide <sup>1</sup>     | 754-91-6                     | N.D.   | 0.43                    | 2.6                   | 1               |
| 14473  | Perfluorooctanesulfonic acid                | 1763-23-1                    | 1.7 J  | 0.35                    | 1.7                   | 1               |
| 14473  | Perfluorooctanoic acid                      | 335-67-1                     | 19     | 0.26                    | 0.86                  | 1               |
| 14473  | Perfluoropentanesulfonate <sup>1</sup>      | 2706-91-4                    | 0.42 J | 0.35                    | 1.7                   | 1               |
| 14473  | Perfluoropentanoic acid <sup>1</sup>        | 2706-90-3                    | 1.7 J  | 1.7                     | 5.2                   | 1               |
| 14473  | Perfluorotetradecanoic acid                 | 376-06-7                     | N.D.   | 0.26                    | 0.86                  | 1               |
| 14473  | Perfluorotridecanoic acid                   | 72629-94-8                   | N.D.   | 0.35                    | 0.86                  | 1               |
| 14473  | Perfluoroundecanoic acid                    | 2058-94-8                    | N.D.   | 0.35                    | 1.7                   | 1               |

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

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

**Sample Description:** 1531010\_009 Grab Water  
PFC Investigation

Merrimack Village District  
**ELLE Sample #:** PW 1081924  
**ELLE Group #:** 2049200  
**Matrix:** Water

**Project Name:** PFC Investigation

**Submittal Date/Time:** 06/15/2019 09:30  
**Collection Date/Time:** 06/14/2019 10:20

| CAT No. | Analysis Name  | CAS Number | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|---------|--|------------|--------|-------------------------|-----------------------|-----------------|
|         | corrective action was taken: This sample was re-extracted within the method holding time and the recovery for the extraction standards was outside of QC acceptance limits. The data is reported from the initial trial of the sample. |            |        |                         |                       |                 |

### Sample Comments

<sup>1</sup> = 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   | 32 PFAS         | EPA 537 Version 1.1 Modified | 1      | 19176002 | 06/27/2019 05:00       | Christine E Dolman | 1               |
| 14091   | PFAS Water Prep | EPA 537 Version 1.1 Modified | 1      | 19176002 | 06/25/2019 09:10       | Courtney J Fatta   | 1               |

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

**Sample Description:** 1531010\_508 Grab Water  
PFC Investigation

Merrimack Village District  
**ELLE Sample #:** PW 1081925  
**ELLE Group #:** 2049200  
**Matrix:** Water

**Project Name:** PFC Investigation

**Submission Date/Time:** 06/15/2019 09:30  
**Collection Date/Time:** 06/14/2019 10:30

| CAT No.  | Analysis Name                               | CAS Number                   | Result | Method Detection Limit* | Limit of Quantitation | Dilution Factor |
|--|---|------------------------------|--------|-------------------------|-----------------------|-----------------|
| LC/MS/MS Miscellaneous   |   | EPA 537 Version 1.1 Modified | ng/l   | ng/l                    | ng/l                  |                 |
| 14473  | 10:2Fluorotelomersulfonic acid <sup>1</sup> | 120226-60-0                  | N.D.   | 0.86                    | 2.6                   | 1               |
| 14473  | 4:2-Fluorotelomersulfonic acid <sup>1</sup> | 757124-72-4                  | N.D.   | 0.86                    | 2.6                   | 1               |
| 14473  | 6:2-Fluorotelomersulfonic acid <sup>1</sup> | 27619-97-2                   | N.D.   | 0.86                    | 1.7                   | 1               |
| 14473  | 8:2-Fluorotelomersulfonic acid <sup>1</sup> | 39108-34-4                   | N.D.   | 1.7                     | 5.2                   | 1               |
| 14473  | NEtFOSAA                                    | 2991-50-6                    | N.D.   | 0.86                    | 2.6                   | 1               |
| NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.     |   |                              |        |                         |                       |                 |
| 14473  | NEtPFOSA <sup>1</sup>                       | 4151-50-2                    | N.D.   | 2.6                     | 7.8                   | 1               |
| NEtPFOSA is the acronym for N-ethylperfluoro-1-octanesulfonamide               |   |                              |        |                         |                       |                 |
| 14473  | NEtPFOSAE <sup>1</sup>                      | 1691-99-2                    | N.D.   | 1.0                     | 2.6                   | 1               |
| NEtPFOSAE is the acronym for 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol  |   |                              |        |                         |                       |                 |
| 14473  | NMeFOSAA                                    | 2355-31-9                    | N.D.   | 0.86                    | 2.6                   | 1               |
| NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.    |   |                              |        |                         |                       |                 |
| 14473  | NMePFOSA <sup>1</sup>                       | 31506-32-8                   | N.D.   | 2.6                     | 7.8                   | 1               |
| NMePFOSA is the acronym for N-methylperfluoro-1-octanesulfonamide              |   |                              |        |                         |                       |                 |
| 14473  | NMePFOSAE <sup>1</sup>                      | 24448-09-7                   | N.D.   | 0.86                    | 2.6                   | 1               |
| NMePFOSAE is the acronym for 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol |   |                              |        |                         |                       |                 |
| 14473  | Perfluorobutanesulfonic acid                | 375-73-5                     | 1.6    | 0.26                    | 0.86                  | 1               |
| 14473  | Perfluorobutanoic acid <sup>1</sup>         | 375-22-4                     | 2.2 J  | 1.7                     | 5.2                   | 1               |
| 14473  | Perfluorodecanesulfonic acid <sup>1</sup>   | 335-77-3                     | N.D.   | 0.52                    | 1.7                   | 1               |
| 14473  | Perfluorodecanoic acid                      | 335-76-2                     | N.D.   | 0.78                    | 1.7                   | 1               |
| 14473  | Perfluorododecanesulfonic acid <sup>1</sup> | 79780-39-5                   | N.D.   | 0.26                    | 0.86                  | 1               |
| 14473  | Perfluorododecanoic acid                    | 307-55-1                     | N.D.   | 0.43                    | 1.7                   | 1               |
| 14473  | Perfluoroheptanesulfonic acid <sup>1</sup>  | 375-92-8                     | N.D.   | 0.35                    | 1.7                   | 1               |
| 14473  | Perfluoroheptanoic acid                     | 375-85-9                     | 2.7    | 0.35                    | 0.86                  | 1               |
| 14473  | Perfluorohexadecanoic acid <sup>1</sup>     | 67905-19-5                   | N.D.   | 0.26                    | 0.86                  | 1               |
| 14473  | Perfluorohexanesulfonic acid                | 355-46-4                     | 1.2 J  | 0.35                    | 1.7                   | 1               |
| 14473  | Perfluorohexanoic acid                      | 307-24-4                     | 2.7    | 0.35                    | 1.7                   | 1               |
| 14473  | Perfluorononanesulfonic acid <sup>1</sup>   | 68259-12-1                   | N.D.   | 0.52                    | 1.7                   | 1               |
| 14473  | Perfluorononanoic acid                      | 375-95-1                     | 0.48 J | 0.35                    | 1.7                   | 1               |
| 14473  | Perfluorooctadecanoic acid <sup>1</sup>     | 16517-11-6                   | N.D.   | 0.43                    | 1.7                   | 1               |
| 14473  | Perfluorooctanesulfonamide <sup>1</sup>     | 754-91-6                     | N.D.   | 0.43                    | 2.6                   | 1               |
| 14473  | Perfluorooctanesulfonic acid                | 1763-23-1                    | 2.2    | 0.35                    | 1.7                   | 1               |
| 14473  | Perfluorooctanoic acid                      | 335-67-1                     | 21     | 0.26                    | 0.86                  | 1               |
| 14473  | Perfluoropentanesulfonate <sup>1</sup>      | 2706-91-4                    | 0.37 J | 0.35                    | 1.7                   | 1               |
| 14473  | Perfluoropentanoic acid <sup>1</sup>        | 2706-90-3                    | N.D.   | 1.7                     | 5.2                   | 1               |
| 14473  | Perfluorotetradecanoic acid                 | 376-06-7                     | N.D.   | 0.26                    | 0.86                  | 1               |
| 14473  | Perfluorotridecanoic acid                   | 72629-94-8                   | N.D.   | 0.35                    | 0.86                  | 1               |
| 14473  | Perfluoroundecanoic acid                    | 2058-94-8                    | N.D.   | 0.35                    | 1.7                   | 1               |

The recovery for extraction standard 13C2-4:2-FTS is outside of QC acceptance limits as noted on the QC Summary.

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

**Sample Description:** 1531010\_508 Grab Water  
PFC Investigation

Merrimack Village District  
**ELLE Sample #:** PW 1081925  
**ELLE Group #:** 2049200  
**Matrix:** Water

**Project Name:** PFC Investigation

**Submittal Date/Time:** 06/15/2019 09:30  
**Collection Date/Time:** 06/14/2019 10:30

### Sample Comments

<sup>1</sup> = 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   | 32 PFAS         | EPA 537 Version 1.1 Modified | 1      | 19176002 | 06/27/2019 05:09       | Jason W Knight   | 1               |
| 14091   | PFAS Water Prep | EPA 537 Version 1.1 Modified | 1      | 19176002 | 06/25/2019 09:10       | Courtney J Fatta | 1               |

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

## Quality Control Summary

Client Name: Merrimack Village District  
Reported: 07/09/2019 15:14

Group Number: 2049200

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: 19176002          | Sample number(s): 1081921-1081925 |       |      |
| 10:2-Fluorotelomersulfonic acid | N.D.                              | 1.0   | 3.0  |
| 4:2-Fluorotelomersulfonic acid  | N.D.                              | 1.0   | 3.0  |
| 6:2-Fluorotelomersulfonic acid  | N.D.                              | 1.0   | 2.0  |
| 8:2-Fluorotelomersulfonic acid  | N.D.                              | 2.0   | 6.0  |
| NEtFOSAA                        | N.D.                              | 1.0   | 3.0  |
| NEtPFOSA                        | N.D.                              | 3.0   | 9.0  |
| NEtPFOSAE                       | N.D.                              | 1.2   | 3.0  |
| NMeFOSAA                        | N.D.                              | 1.0   | 3.0  |
| NMePFOSA                        | N.D.                              | 3.0   | 9.0  |
| NMePFOSAE                       | N.D.                              | 1.0   | 3.0  |
| Perfluorobutanesulfonic acid    | N.D.                              | 0.30  | 1.0  |
| Perfluorobutanoic acid          | N.D.                              | 2.0   | 6.0  |
| Perfluorodecanesulfonic acid    | N.D.                              | 0.60  | 2.0  |
| Perfluorodecanoic acid          | N.D.                              | 0.90  | 2.0  |
| Perfluorododecanesulfonic acid  | N.D.                              | 0.30  | 1.0  |
| Perfluorododecanoic acid        | N.D.                              | 0.50  | 2.0  |
| Perfluoroheptanesulfonic acid   | N.D.                              | 0.40  | 2.0  |
| Perfluoroheptanoic acid         | N.D.                              | 0.40  | 1.0  |
| Perfluorohexadecanoic acid      | N.D.                              | 0.30  | 1.0  |
| Perfluorohexanesulfonic acid    | N.D.                              | 0.40  | 2.0  |
| Perfluorohexanoic acid          | N.D.                              | 0.40  | 2.0  |
| Perfluorononanesulfonic acid    | N.D.                              | 0.60  | 2.0  |
| Perfluorononanoic acid          | N.D.                              | 0.40  | 2.0  |
| Perfluorooctadecanoic acid      | N.D.                              | 0.50  | 2.0  |
| Perfluorooctanesulfonamide      | N.D.                              | 0.50  | 3.0  |
| Perfluorooctanesulfonic acid    | N.D.                              | 0.40  | 2.0  |
| Perfluorooctanoic acid          | N.D.                              | 0.30  | 1.0  |
| Perfluoropentanesulfonate       | N.D.                              | 0.40  | 2.0  |
| Perfluoropentanoic acid         | N.D.                              | 2.0   | 6.0  |
| Perfluorotetradecanoic acid     | N.D.                              | 0.30  | 1.0  |
| Perfluorotridecanoic acid       | N.D.                              | 0.40  | 1.0  |
| Perfluoroundecanoic acid        | N.D.                              | 0.40  | 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: 07/09/2019 15:14

Group Number: 2049200

### LCS/LCSD

| Analysis Name                  | LCS Spike Added<br>ng/l           | LCS Conc<br>ng/l | LCSD Spike Added<br>ng/l | LCSD Conc<br>ng/l | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|--------------------------------|-----------------------------------|------------------|--------------------------|-------------------|----------|-----------|-----------------|-----|---------|
| Batch number: 19176002         | Sample number(s): 1081921-1081925 |                  |                          |                   |          |           |                 |     |         |
| 10:2Fluorotelomersulfonic acid | 15.42                             | 18.63            | 15.42                    | 18.24             | 121      | 118       | 49-186          | 2   | 30      |
| 4:2-Fluorotelomersulfonic acid | 14.94                             | 15.24            | 14.94                    | 14.65             | 102      | 98        | 82-152          | 4   | 30      |
| 6:2-Fluorotelomersulfonic acid | 15.17                             | 16.46            | 15.17                    | 16.76             | 109      | 111       | 66-155          | 2   | 30      |
| 8:2-Fluorotelomersulfonic acid | 15.33                             | 17.99            | 15.33                    | 18.75             | 117      | 122       | 66-148          | 4   | 30      |
| NEtFOSAA                       | 5.44                              | 5.57             | 5.44                     | 5.77              | 102      | 106       | 55-169          | 3   | 30      |
| NEtPFOSA                       | 5.44                              | 5.51             | 5.44                     | 5.74              | 101      | 105       | 70-130          | 4   | 30      |
| NEtPFOSAE                      | 5.44                              | 5.55             | 5.44                     | 5.42              | 102      | 100       | 70-130          | 2   | 30      |
| NMeFOSAA                       | 5.44                              | 5.76             | 5.44                     | 5.71              | 106      | 105       | 44-147          | 1   | 30      |
| NMePFOSA                       | 5.44                              | 5.42             | 5.44                     | 4.93              | 100      | 91        | 70-130          | 10  | 30      |
| NMePFOSAE                      | 5.44                              | 5.92             | 5.44                     | 5.21              | 109      | 96        | 70-130          | 13  | 30      |
| Perfluorobutanesulfonic acid   | 4.81                              | 5.13             | 4.81                     | 5.07              | 107      | 105       | 73-128          | 1   | 30      |
| Perfluorobutanoic acid         | 5.44                              | 6.28             | 5.44                     | 6.54              | 115      | 120       | 74-142          | 4   | 30      |
| Perfluorodecanesulfonic acid   | 5.24                              | 5.56             | 5.24                     | 5.25              | 106      | 100       | 60-135          | 6   | 30      |
| Perfluorodecanoic acid         | 5.44                              | 5.29             | 5.44                     | 5.29              | 97       | 97        | 69-148          | 0   | 30      |
| Perfluorododecanesulfonic acid | 5.28                              | 5.82             | 5.28                     | 5.26              | 110      | 100       | 70-130          | 10  | 30      |
| Perfluorododecanoic acid       | 5.44                              | 5.83             | 5.44                     | 6.40              | 107      | 118       | 75-136          | 9   | 30      |
| Perfluoroheptanesulfonic acid  | 5.18                              | 5.54             | 5.18                     | 5.06              | 107      | 98        | 64-135          | 9   | 30      |
| Perfluoroheptanoic acid        | 5.44                              | 5.47             | 5.44                     | 5.89              | 101      | 108       | 76-140          | 7   | 30      |
| Perfluorohexadecanoic acid     | 5.44                              | 5.56             | 5.44                     | 5.81              | 102      | 107       | 21-151          | 5   | 30      |
| Perfluorohexanesulfonic acid   | 5.14                              | 4.76             | 5.14                     | 4.68              | 93       | 91        | 71-131          | 2   | 30      |
| Perfluorohexanoic acid         | 5.44                              | 5.69             | 5.44                     | 5.76              | 105      | 106       | 75-135          | 1   | 30      |
| Perfluorononanesulfonic acid   | 5.22                              | 5.67             | 5.22                     | 5.91              | 108      | 113       | 66-133          | 4   | 30      |
| Perfluorononanoic acid         | 5.44                              | 5.61             | 5.44                     | 5.74              | 103      | 106       | 72-148          | 2   | 30      |
| Perfluorooctadecanoic acid     | 5.44                              | 5.43             | 5.44                     | 5.76              | 100      | 106       | 70-130          | 6   | 30      |
| Perfluorooctanesulfonamide     | 5.44                              | 6.08             | 5.44                     | 6.09              | 112      | 112       | 65-164          | 0   | 30      |
| Perfluorooctanesulfonic acid   | 5.20                              | 4.87             | 5.20                     | 4.85              | 94       | 93        | 67-138          | 0   | 30      |
| Perfluorooctanoic acid         | 5.44                              | 5.74             | 5.44                     | 5.87              | 105      | 108       | 72-138          | 2   | 30      |
| Perfluoropentanesulfonate      | 5.10                              | 5.16             | 5.10                     | 5.31              | 101      | 104       | 76-127          | 3   | 30      |
| Perfluoropentanoic acid        | 5.44                              | 4.77             | 5.44                     | 4.83              | 88       | 89        | 74-134          | 1   | 30      |
| Perfluorotetradecanoic acid    | 5.44                              | 5.30             | 5.44                     | 5.95              | 97       | 109       | 74-135          | 12  | 30      |
| Perfluorotridecanoic acid      | 5.44                              | 5.83             | 5.44                     | 5.82              | 107      | 107       | 61-145          | 0   | 30      |
| Perfluoroundecanoic acid       | 5.44                              | 5.76             | 5.44                     | 5.94              | 106      | 109       | 75-146          | 3   | 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: 07/09/2019 15:14

Group Number: 2049200

### 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: 32 PFAS  
Batch number: 19176002

|         | 13C4-PFBA | 13C5-PFPeA | 13C3-PFBS | 13C2-4:2-FTS | 13C5-PFHxA | 13C3-PFHxS |
|---------|-----------|------------|-----------|--------------|------------|------------|
| 1081921 | 77        | 103        | 103       | 160          | 70         | 70         |
| 1081922 | 76        | 100        | 103       | 184*         | 69         | 67         |
| 1081923 | 71        | 90         | 100       | 196*         | 73         | 63         |
| 1081924 | 74        | 94         | 100       | 175          | 72         | 65         |
| 1081925 | 80        | 105        | 115       | 203*         | 67         | 78         |
| Blank   | 78        | 83         | 72        | 85           | 77         | 84         |
| LCS     | 78        | 82         | 76        | 78           | 79         | 79         |
| LCSD    | 74        | 78         | 72        | 78           | 74         | 78         |

Limits: 33-123 31-157 26-148 21-182 35-138 34-126

|         | 13C4-PFHpA | 13C2-6:2-FTS | 13C8-PFOA | 13C8-PFOS | 13C9-PFNA | 13C6-PFDA |
|---------|------------|--------------|-----------|-----------|-----------|-----------|
| 1081921 | 61         | 107          | 72        | 72        | 76        | 75        |
| 1081922 | 59         | 110          | 70        | 72        | 75        | 74        |
| 1081923 | 58         | 107          | 69        | 61        | 61        | 69        |
| 1081924 | 61         | 108          | 73        | 76        | 75        | 73        |
| 1081925 | 68         | 122          | 76        | 74        | 77        | 79        |
| Blank   | 84         | 82           | 77        | 79        | 77        | 77        |
| LCS     | 78         | 76           | 78        | 80        | 83        | 79        |
| LCSD    | 74         | 70           | 74        | 75        | 72        | 80        |

Limits: 35-126 32-170 48-122 50-121 41-144 47-125

|         | 13C2-8:2-FTS | d3-NMeFOSAA | 13C7-PFUnDA | d5-NEIFOSAA | 13C2-PFDoDA | 13C2-PFTeDA |
|---------|--------------|-------------|-------------|-------------|-------------|-------------|
| 1081921 | 83           | 84          | 71          | 84          | 63          | 56          |
| 1081922 | 87           | 85          | 69          | 84          | 59          | 36          |
| 1081923 | 88           | 64          | 41          | 61          | 15*         | 1*          |
| 1081924 | 80           | 87          | 64          | 75          | 48          | 17*         |
| 1081925 | 99           | 74          | 64          | 80          | 61          | 37          |
| Blank   | 77           | 79          | 68          | 79          | 69          | 63          |
| LCS     | 70           | 84          | 72          | 80          | 71          | 69          |
| LCSD    | 73           | 81          | 78          | 81          | 75          | 67          |

Limits: 27-164 30-127 30-128 30-142 39-130 26-119

|         | 13C8-PFOSA | d7-NMePFOSAE | d3-NMePFOSA | d9-NEIPFOSAE | d5-NEIPFOSA |
|---------|------------|--------------|-------------|--------------|-------------|
| 1081921 | 67         | 61           | 51          | 64           | 50          |
| 1081922 | 52         | 29           | 10          | 28           | 11          |
| 1081923 | 38         | 8*           | 1*          | 7*           | 1*          |
| 1081924 | 37         | 11           | 2*          | 13           | 2*          |
| 1081925 | 54         | 35           | 13          | 35           | 11          |

\*- 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: 07/09/2019 15:14

Group Number: 2049200

### 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: 32 PFAS

Batch number: 19176002

|         | 13C8-PFOSA | d7-NMePFOSAE | d3-NMePFOSA | d9-NEiPFOSAE | d5-NEiPFOSA |
|---------|------------|--------------|-------------|--------------|-------------|
| Blank   | 66         | 63           | 57          | 65           | 58          |
| LCS     | 63         | 63           | 51          | 72           | 57          |
| LCSD    | 63         | 63           | 50          | 71           | 58          |
| Limits: | 11-127     | 10-128       | 10-104      | 10-121       | 10-106      |

\*- 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.



# Environmental Analysis Request/Chain of Custody



Lancaster Laboratories  
Environmental

Acct. # 38083 Group # 2649200 Sample # 1081921-25

| Client: <u>Merrimack Village District</u>  |                |              |                                     | Matrix   |                          |                                     |                          | Analyses Requested                             |                                     |         |      | For Lab Use Only  |      |       |       |                       |         |      |      |                                |                |             |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                             |                |              |                                     |                          |                          |                                     |                          |          |                                     |         |  |
|--|----------------|--------------|-------------------------------------|--|--------------------------|-------------------------------------|--------------------------|--|-------------------------------------|---------|------|---|------|-------|-------|-----------------------|---------|------|------|--------------------------------|----------------|-------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|----------|-------------------------------------|--------------------------------|----------------|--------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|----------|-------------------------------------|--------------------------------|----------------|--------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|----------|-------------------------------------|--------------------------------|----------------|--------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|----------|-------------------------------------|-----------------------------|----------------|--------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|----------|-------------------------------------|---------|--|
| Project Name/ID: <u>PFC Investigation</u> / Site ID #:   |                |              |                                     | <input type="checkbox"/> Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Tissue<br><input type="checkbox"/> Potable <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Surface<br><input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Other:   |                          |                                     |                          | Preservation and Filtration Codes              |                                     |         |      | SF #: _____   |      |       |       |                       |         |      |      |                                |                |             |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                             |                |              |                                     |                          |                          |                                     |                          |          |                                     |         |  |
| Project Manager: <u>Jill Lavoie</u> / P.O. #:  |                |              |                                     | Total # of Containers: <u>PPAS by isotope collection</u>   |                          |                                     |                          | <u>32 Compounds</u>                            |                                     |         |      | SCR #: _____  |      |       |       |                       |         |      |      |                                |                |             |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                             |                |              |                                     |                          |                          |                                     |                          |          |                                     |         |  |
| Sampler: <u>Ronald Miner</u> / PWSID #: <u>1531010</u>   |                |              |                                     |  |                          |                                     |                          |  |                                     |         |      | Preservation Codes  |      |       |       |                       |         |      |      |                                |                |             |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                             |                |              |                                     |                          |                          |                                     |                          |          |                                     |         |  |
| Phone #: <u>(603) 424-9241 x103</u> / Quote #:   |                |              |                                     |  |                          |                                     |                          |  |                                     |         |      | H = HCl      T = Thiosulfate<br>N = HNO <sub>3</sub> B = NaOH<br>S = H <sub>2</sub> SO <sub>4</sub> P = H <sub>3</sub> PO <sub>4</sub><br>F = Field Filtered      O = Other |      |       |       |                       |         |      |      |                                |                |             |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                             |                |              |                                     |                          |                          |                                     |                          |          |                                     |         |  |
| State where samples were collected: <u>NH</u> / For Compliance: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>  |                |              |                                     | Sample Identification<br><table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Sample ID</th> <th colspan="2">Collection</th> <th rowspan="2">Grab</th> <th rowspan="2">Composite</th> <th rowspan="2">Soil</th> <th rowspan="2">Water</th> <th rowspan="2">Other</th> <th rowspan="2">Total # of Containers</th> <th rowspan="2">Remarks</th> </tr> <tr> <th>Date</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td><u>MVD-2 (T) / 1531010-008</u></td> <td><u>6/14/19</u></td> <td><u>9:30</u></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><u>2</u></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><u>MVD-3 (T) / 1531010-003</u></td> <td><u>6/14/19</u></td> <td><u>10:57</u></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><u>2</u></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><u>MVD-7 (R) / 1531010-007</u></td> <td><u>6/14/19</u></td> <td><u>10:15</u></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><u>2</u></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><u>MVD-8 (R) / 1531010-009</u></td> <td><u>6/14/19</u></td> <td><u>10:28</u></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><u>2</u></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td><u>MVD-TP / 1531010-508</u></td> <td><u>6/14/19</u></td> <td><u>10:30</u></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><u>2</u></td> <td><input checked="" type="checkbox"/></td> </tr> </tbody> </table> |                          |                                     |                          | Sample ID                                      | Collection                          |         | Grab | Composite   | Soil | Water | Other | Total # of Containers | Remarks | Date | Time | <u>MVD-2 (T) / 1531010-008</u> | <u>6/14/19</u> | <u>9:30</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>2</u> | <input checked="" type="checkbox"/> | <u>MVD-3 (T) / 1531010-003</u> | <u>6/14/19</u> | <u>10:57</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>2</u> | <input checked="" type="checkbox"/> | <u>MVD-7 (R) / 1531010-007</u> | <u>6/14/19</u> | <u>10:15</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>2</u> | <input checked="" type="checkbox"/> | <u>MVD-8 (R) / 1531010-009</u> | <u>6/14/19</u> | <u>10:28</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>2</u> | <input checked="" type="checkbox"/> | <u>MVD-TP / 1531010-508</u> | <u>6/14/19</u> | <u>10:30</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>2</u> | <input checked="" type="checkbox"/> | Remarks |  |
| Sample ID  | Collection     |              | Grab                                | Composite  | Soil                     | Water                               | Other                    |  | Total # of Containers               | Remarks |      |   |      |       |       |                       |         |      |      |                                |                |             |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                             |                |              |                                     |                          |                          |                                     |                          |          |                                     |         |  |
|  | Date           | Time         |                                     |  |                          |                                     |                          |  |                                     |         |      |   |      |       |       |                       |         |      |      |                                |                |             |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                             |                |              |                                     |                          |                          |                                     |                          |          |                                     |         |  |
| <u>MVD-2 (T) / 1531010-008</u>   | <u>6/14/19</u> | <u>9:30</u>  | <input checked="" type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>2</u>                                       | <input checked="" type="checkbox"/> |         |      |   |      |       |       |                       |         |      |      |                                |                |             |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                             |                |              |                                     |                          |                          |                                     |                          |          |                                     |         |  |
| <u>MVD-3 (T) / 1531010-003</u>   | <u>6/14/19</u> | <u>10:57</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>2</u>                                       | <input checked="" type="checkbox"/> |         |      |   |      |       |       |                       |         |      |      |                                |                |             |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                             |                |              |                                     |                          |                          |                                     |                          |          |                                     |         |  |
| <u>MVD-7 (R) / 1531010-007</u>   | <u>6/14/19</u> | <u>10:15</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>2</u>                                       | <input checked="" type="checkbox"/> |         |      |   |      |       |       |                       |         |      |      |                                |                |             |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                             |                |              |                                     |                          |                          |                                     |                          |          |                                     |         |  |
| <u>MVD-8 (R) / 1531010-009</u>   | <u>6/14/19</u> | <u>10:28</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>2</u>                                       | <input checked="" type="checkbox"/> |         |      |   |      |       |       |                       |         |      |      |                                |                |             |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                             |                |              |                                     |                          |                          |                                     |                          |          |                                     |         |  |
| <u>MVD-TP / 1531010-508</u>  | <u>6/14/19</u> | <u>10:30</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <u>2</u>                                       | <input checked="" type="checkbox"/> |         |      |   |      |       |       |                       |         |      |      |                                |                |             |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                             |                |              |                                     |                          |                          |                                     |                          |          |                                     |         |  |
| Turnaround Time Requested (TAT) (please check): Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>   |                |              |                                     | Relinquished by: <u>Ronald Miner</u> / Date: <u>6/14/19</u> / Time: <u>11:20</u>   |                          |                                     |                          | Received by: _____ / Date: _____ / Time: _____ |                                     |         |      |   |      |       |       |                       |         |      |      |                                |                |             |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                             |                |              |                                     |                          |                          |                                     |                          |          |                                     |         |  |
| Date results are needed: _____   |                |              |                                     | Relinquished by: _____ / Date: _____ / Time: _____   |                          |                                     |                          | Received by: _____ / Date: _____ / Time: _____ |                                     |         |      |   |      |       |       |                       |         |      |      |                                |                |             |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                             |                |              |                                     |                          |                          |                                     |                          |          |                                     |         |  |
| Rush results requested by (please check): E-Mail <input type="checkbox"/> Phone <input type="checkbox"/>   |                |              |                                     | Relinquished by: _____ / Date: _____ / Time: _____   |                          |                                     |                          | Received by: _____ / Date: _____ / Time: _____ |                                     |         |      |   |      |       |       |                       |         |      |      |                                |                |             |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                             |                |              |                                     |                          |                          |                                     |                          |          |                                     |         |  |
| E-mail Address: _____  |                |              |                                     | Relinquished by: _____ / Date: _____ / Time: _____   |                          |                                     |                          | Received by: _____ / Date: _____ / Time: _____ |                                     |         |      |   |      |       |       |                       |         |      |      |                                |                |             |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                             |                |              |                                     |                          |                          |                                     |                          |          |                                     |         |  |
| Phone: _____   |                |              |                                     | Relinquished by: _____ / Date: _____ / Time: _____   |                          |                                     |                          | Received by: _____ / Date: _____ / Time: _____ |                                     |         |      |   |      |       |       |                       |         |      |      |                                |                |             |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                             |                |              |                                     |                          |                          |                                     |                          |          |                                     |         |  |
| Data Package Options (please check if required)  |                |              |                                     | Relinquished by Commercial Carrier: _____  |                          |                                     |                          | Temperature upon receipt: <u>2.4</u> °C        |                                     |         |      |   |      |       |       |                       |         |      |      |                                |                |             |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                             |                |              |                                     |                          |                          |                                     |                          |          |                                     |         |  |
| Type I (Validation/non-CLP) <input type="checkbox"/> MA MCP <input type="checkbox"/><br>Type III (Reduced non-CLP) <input type="checkbox"/> CT RCP <input type="checkbox"/><br>Type VI (Raw Data Only) <input type="checkbox"/> TX TRRP-13 <input type="checkbox"/><br>NJ DKQP <input type="checkbox"/> NYSDEC Category <input type="checkbox"/> A or <input type="checkbox"/> B |                |              |                                     | UPS <input type="checkbox"/> FedEx <input checked="" type="checkbox"/> Other <input type="checkbox"/>  |                          |                                     |                          | Date: <u>6/15/19</u> / Time: <u>09:30</u>      |                                     |         |      |   |      |       |       |                       |         |      |      |                                |                |             |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                             |                |              |                                     |                          |                          |                                     |                          |          |                                     |         |  |
| EDD Required? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, format: _____   |                |              |                                     |  |                          |                                     |                          |  |                                     |         |      |   |      |       |       |                       |         |      |      |                                |                |             |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                                |                |              |                                     |                          |                          |                                     |                          |          |                                     |                             |                |              |                                     |                          |                          |                                     |                          |          |                                     |         |  |



Client: Merrimack Village District

**Delivery and Receipt Information**

|                           |               |                     |                        |
|---------------------------|---------------|---------------------|------------------------|
| Delivery Method:          | <u>Fed Ex</u> | Arrival Timestamp:  | <u>06/15/2019 9:30</u> |
| Number of Packages:       | <u>1</u>      | Number of Projects: | <u>1</u>               |
| State/Province of Origin: | <u>NH</u>     |                     |                        |

**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 | VOA Vial Headspace $\geq$ 6mm:      | N/A |
| Samples Chilled:                     | Yes | Total Trip Blank Qty:               | 0   |
| Paperwork Enclosed:                  | Yes | Air Quality Samples Present:        | No  |
| Samples Intact:                      | Yes |                                     |     |
| Missing Samples:                     | No  |                                     |     |
| Extra Samples:                       | No  |                                     |     |
| Discrepancy in Container Qty on COC: | No  |                                     |     |

*Unpacked by Darian Jaynes (29952) at 12:57 on 06/15/2019*

**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               | DT42-01               | 2.4                   | DT                 | Wet             | Y                   | Bagged               | N                     |

# Explanation of Symbols and Abbreviations

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

|                         |  |                 |                               |
|-------------------------|--|-----------------|-------------------------------|
| <b>BMQL</b>             | Below Minimum Quantitation Level   | <b>mL</b>       | milliliter(s)                 |
| <b>C</b>                | degrees Celsius  | <b>MPN</b>      | Most Probable Number          |
| <b>cfu</b>              | colony forming units   | <b>N.D.</b>     | non-detect                    |
| <b>CP Units</b>         | cobalt-chloroplatinate units   | <b>ng</b>       | nanogram(s)                   |
| <b>F</b>                | degrees Fahrenheit   | <b>NTU</b>      | nephelometric turbidity units |
| <b>g</b>                | gram(s)  | <b>pg/L</b>     | picogram/liter                |
| <b>IU</b>               | International Units  | <b>RL</b>       | Reporting Limit               |
| <b>kg</b>               | kilogram(s)  | <b>TNTC</b>     | Too Numerous To Count         |
| <b>L</b>                | liter(s)   | <b>µg</b>       | microgram(s)                  |
| <b>lb.</b>              | pound(s)   | <b>µL</b>       | microliter(s)                 |
| <b>m3</b>               | cubic meter(s)   | <b>umhos/cm</b> | micromhos/cm                  |
| <b>meq</b>              | milliequivalents   | <b>MCL</b>      | Maximum Contamination Limit   |
| <b>mg</b>               | milligram(s)   |                 |                               |
| <b>&lt;</b>             | less than  |                 |                               |
| <b>&gt;</b>             | greater than   |                 |                               |
| <b>ppm</b>              | 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. |                 |                               |
| <b>ppb</b>              | parts per billion  |                 |                               |
| <b>Dry weight basis</b> | 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.

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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.

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# 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.