



# ANALYTICAL REPORT

## PREPARED FOR

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MN Dept of Military Affairs Facilities Management Office  
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Little Falls, Minnesota 56345-4173

Generated 9/18/2024 1:09:35 AM

## JOB DESCRIPTION

533 in drinking water

## JOB NUMBER

410-186028-1

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

## Authorization



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Authorized for release by  
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## Compliance Statement

Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
- 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 is performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

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

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

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## Definitions/Glossary

Client: MN Dept of Military Affairs Facilities Management Office  
Project/Site: 533 in drinking water

Job ID: 410-186028-1

### Qualifiers

#### LCMS

Qualifier	Qualifier Description
D	The reported value is from a dilution.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
M	Manual integrated compound.

### Glossary

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

# Case Narrative

Client: MN Dept of Military Affairs Facilities Management Office  
Project: 533 in drinking water

Job ID: 410-186028-1

**Job ID: 410-186028-1**

**Eurofins Lancaster Laboratories Environment**

## Job Narrative 410-186028-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

### Receipt

The samples were received on 8/28/2024 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 3.5°C and 4.1°C.

### Receipt Exceptions

The following sample was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): Pine City (410-186028-32). The client was notified and provided instructions to analyze this sample.

### PFAS

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

# Detection Summary

Client: MN Dept of Military Affairs Facilities Management Office  
Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Client Sample ID: Olivia 01

Lab Sample ID: 410-186028-1

No Detections.

## Client Sample ID: FB-01

Lab Sample ID: 410-186028-2

No Detections.

## Client Sample ID: Appleton-01

Lab Sample ID: 410-186028-3

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	1.3	J M	2.9	0.95	ng/L	1		EPA 533	Total/NA

## Client Sample ID: Ortonville-01

Lab Sample ID: 410-186028-4

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.86	J M	2.6	0.85	ng/L	1		EPA 533	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.48	J	1.7	0.43	ng/L	1		EPA 533	Total/NA

## Client Sample ID: FD-01

Lab Sample ID: 410-186028-5

No Detections.

## Client Sample ID: Marshall-01

Lab Sample ID: 410-186028-6

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	0.75	J	1.8	0.45	ng/L	1		EPA 533	Total/NA
Perfluorohexanoic acid (PFHxA)	0.75	J	1.8	0.45	ng/L	1		EPA 533	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.77	J	1.8	0.45	ng/L	1		EPA 533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.6	J M	1.8	0.45	ng/L	1		EPA 533	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.51	J	1.8	0.45	ng/L	1		EPA 533	Total/NA

## Client Sample ID: FB-02

Lab Sample ID: 410-186028-7

No Detections.

## Client Sample ID: Pipestone-01

Lab Sample ID: 410-186028-8

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	0.59	J M	1.8	0.45	ng/L	1		EPA 533	Total/NA
Perfluorobutanesulfonic acid (PFBS)	4.6		1.8	0.45	ng/L	1		EPA 533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.72	J M	1.8	0.45	ng/L	1		EPA 533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.58	J M	1.8	0.45	ng/L	1		EPA 533	Total/NA

## Client Sample ID: Luverne-01

Lab Sample ID: 410-186028-9

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.3	J M	2.6	0.87	ng/L	1		EPA 533	Total/NA

## Client Sample ID: Jackson-01

Lab Sample ID: 410-186028-10

No Detections.

## Client Sample ID: St James-01

Lab Sample ID: 410-186028-11

No Detections.

## Client Sample ID: Chanhassen-01

Lab Sample ID: 410-186028-12

No Detections.

This Detection Summary does not include radiochemical test results.

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## Detection Summary

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

### Client Sample ID: Lakeville-01

Lab Sample ID: 410-186028-13

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.5	M	2.7	0.89	ng/L	1		EPA 533	Total/NA

### Client Sample ID: Cottage Grove-01

Lab Sample ID: 410-186028-14

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	4.4	M	2.5	0.83	ng/L	1		EPA 533	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.76	J	1.7	0.42	ng/L	1		EPA 533	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.44	J	1.7	0.42	ng/L	1		EPA 533	Total/NA

### Client Sample ID: Hastings-01

Lab Sample ID: 410-186028-15

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	8.2		1.7	0.42	ng/L	1		EPA 533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.0		1.7	0.42	ng/L	1		EPA 533	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.69	J	1.7	0.42	ng/L	1		EPA 533	Total/NA
Perfluorooctanoic acid (PFOA)	8.7	M	1.7	0.42	ng/L	1		EPA 533	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.1	J	1.7	0.42	ng/L	1		EPA 533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.3	J M	1.7	0.42	ng/L	1		EPA 533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.3	J M	1.7	0.42	ng/L	1		EPA 533	Total/NA
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.65	J M	1.7	0.42	ng/L	1		EPA 533	Total/NA
Perfluorobutanoic acid (PFBA) - DL	140	D	25	8.4	ng/L	10		EPA 533	Total/NA

### Client Sample ID: Red Wing-01

Lab Sample ID: 410-186028-16

No Detections.

### Client Sample ID: Winona-01

Lab Sample ID: 410-186028-17

No Detections.

### Client Sample ID: Owatonna-01

Lab Sample ID: 410-186028-18

No Detections.

### Client Sample ID: FD-03

Lab Sample ID: 410-186028-19

No Detections.

### Client Sample ID: FD-02

Lab Sample ID: 410-186028-20

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	3.7	M	2.6	0.86	ng/L	1		EPA 533	Total/NA
Perfluoropentanoic acid (PFPeA)	1.0	J	1.7	0.43	ng/L	1		EPA 533	Total/NA
Perfluorohexanoic acid (PFHxA)	0.82	J M	1.7	0.43	ng/L	1		EPA 533	Total/NA
Perfluorooctanoic acid (PFOA)	0.67	J M	1.7	0.43	ng/L	1		EPA 533	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.9		1.7	0.43	ng/L	1		EPA 533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.6	M	1.7	0.43	ng/L	1		EPA 533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.4	M	1.7	0.43	ng/L	1		EPA 533	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.59	J	1.7	0.43	ng/L	1		EPA 533	Total/NA

### Client Sample ID: Sauk Center-01

Lab Sample ID: 410-186028-21

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	3.6	M	2.5	0.84	ng/L	1		EPA 533	Total/NA

This Detection Summary does not include radiochemical test results.

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# Detection Summary

Client: MN Dept of Military Affairs Facilities Management Office  
Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Client Sample ID: Sauk Center-01 (Continued)

Lab Sample ID: 410-186028-21

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	0.62	J M	1.7	0.42	ng/L	1		EPA 533	Total/NA
Perfluorohexanoic acid (PFHxA)	0.53	J M	1.7	0.42	ng/L	1		EPA 533	Total/NA
Perfluorooctanoic acid (PFOA)	1.0	J M	1.7	0.42	ng/L	1		EPA 533	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.6	J	1.7	0.42	ng/L	1		EPA 533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.85	J M	1.7	0.42	ng/L	1		EPA 533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.2	J M	1.7	0.42	ng/L	1		EPA 533	Total/NA

## Client Sample ID: FB-03

Lab Sample ID: 410-186028-22

No Detections.

## Client Sample ID: Alexandria-01

Lab Sample ID: 410-186028-23

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	4.0	M	2.5	0.82	ng/L	1		EPA 533	Total/NA
Perfluoropentanoic acid (PFPeA)	1.4	J M	1.6	0.41	ng/L	1		EPA 533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.2		1.6	0.41	ng/L	1		EPA 533	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.59	J	1.6	0.41	ng/L	1		EPA 533	Total/NA
Perfluorooctanoic acid (PFOA)	2.4	M	1.6	0.41	ng/L	1		EPA 533	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.7	M	1.6	0.41	ng/L	1		EPA 533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	8.6	M	1.6	0.41	ng/L	1		EPA 533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.8	M	1.6	0.41	ng/L	1		EPA 533	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	1.9		1.6	0.41	ng/L	1		EPA 533	Total/NA

## Client Sample ID: Fergus Falls-01

Lab Sample ID: 410-186028-24

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	3.5	M	2.6	0.87	ng/L	1		EPA 533	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.45	J	1.7	0.44	ng/L	1		EPA 533	Total/NA
Perfluorooctanoic acid (PFOA)	0.47	J M	1.7	0.44	ng/L	1		EPA 533	Total/NA

## Client Sample ID: Cambridge-01

Lab Sample ID: 410-186028-25

No Detections.

## Client Sample ID: FB-04

Lab Sample ID: 410-186028-26

No Detections.

## Client Sample ID: Hibbring-01

Lab Sample ID: 410-186028-27

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	0.43	J M	1.7	0.42	ng/L	1		EPA 533	Total/NA

## Client Sample ID: Chisholm-01

Lab Sample ID: 410-186028-28

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	1.7	J M	2.6	0.86	ng/L	1		EPA 533	Total/NA

## Client Sample ID: Brainerd-01

Lab Sample ID: 410-186028-29

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	3.6	M	2.6	0.85	ng/L	1		EPA 533	Total/NA
Perfluoropentanoic acid (PFPeA)	1.1	J	1.7	0.43	ng/L	1		EPA 533	Total/NA
Perfluorohexanoic acid (PFHxA)	0.87	J M	1.7	0.43	ng/L	1		EPA 533	Total/NA

This Detection Summary does not include radiochemical test results.

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# Detection Summary

Client: MN Dept of Military Affairs Facilities Management Office  
Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Client Sample ID: Brainerd-01 (Continued)

Lab Sample ID: 410-186028-29

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	0.75	J M	1.7	0.43	ng/L	1		EPA 533	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.8		1.7	0.43	ng/L	1		EPA 533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.4	M	1.7	0.43	ng/L	1		EPA 533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.5		1.7	0.43	ng/L	1		EPA 533	Total/NA
Perfluoropentanesulfonic acid (PFPeS)	0.58	J	1.7	0.43	ng/L	1		EPA 533	Total/NA

## Client Sample ID: Monticello-01

Lab Sample ID: 410-186028-30

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	3.9	M	2.6	0.88	ng/L	1		EPA 533	Total/NA

## Client Sample ID: FB-05

Lab Sample ID: 410-186028-31

No Detections.

## Client Sample ID: Pine City

Lab Sample ID: 410-186028-32

Analyte	Result	Qualifier	LOQ	DL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.6	M	2.6	0.88	ng/L	1		EPA 533	Total/NA
Perfluoropentanoic acid (PFPeA)	1.7	J M	1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluorohexanoic acid (PFHxA)	3.7	M	1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.1	J M	1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluorooctanoic acid (PFOA)	5.8	M	1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.4	J M	1.8	0.44	ng/L	1		EPA 533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.8	M	1.8	0.44	ng/L	1		EPA 533	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Olivia 01**

**Lab Sample ID: 410-186028-1**

**Date Collected: 08/21/24 09:08**

**Matrix: Drinking Water**

**Date Received: 08/28/24 09:50**

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<1.7		2.6	0.85	ng/L		09/06/24 10:46	09/09/24 21:18	1
Perfluoropentanoic acid (PFPeA)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
Perfluorohexanoic acid (PFHxA)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
Perfluoroheptanoic acid (PFHpA)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
Perfluorooctanoic acid (PFOA)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
Perfluorononanoic acid (PFNA)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
Perfluorodecanoic acid (PFDA)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
Perfluorobutanesulfonic acid (PFBS)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
Perfluorohexanesulfonic acid (PFHxS)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
Perfluorooctanesulfonic acid (PFOS)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
Perfluoropentanesulfonic acid (PFPeS)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9CI-PF3ONS)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
11CI-PF3OUdS	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.7		2.6	0.85	ng/L		09/06/24 10:46	09/09/24 21:18	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.3		1.7	0.43	ng/L		09/06/24 10:46	09/09/24 21:18	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	93		50 - 200				09/06/24 10:46	09/09/24 21:18	1
13C4 PFBA	101		50 - 200				09/06/24 10:46	09/09/24 21:18	1
13C3 PFBS	95		50 - 200				09/06/24 10:46	09/09/24 21:18	1
13C5 PFPeA	115		50 - 200				09/06/24 10:46	09/09/24 21:18	1
13C5 PFHxA	96		50 - 200				09/06/24 10:46	09/09/24 21:18	1
13C4 PFHpA	97		50 - 200				09/06/24 10:46	09/09/24 21:18	1
13C8 PFOA	100		50 - 200				09/06/24 10:46	09/09/24 21:18	1
13C9 PFNA	95		50 - 200				09/06/24 10:46	09/09/24 21:18	1
13C6 PFDA	101		50 - 200				09/06/24 10:46	09/09/24 21:18	1
13C7 PFUnA	94		50 - 200				09/06/24 10:46	09/09/24 21:18	1
13C2 PFDoA	96		50 - 200				09/06/24 10:46	09/09/24 21:18	1
13C8 PFOS	100		50 - 200				09/06/24 10:46	09/09/24 21:18	1
M2-4:2 FTS	86		50 - 200				09/06/24 10:46	09/09/24 21:18	1
M2-6:2 FTS	89		50 - 200				09/06/24 10:46	09/09/24 21:18	1

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Olivia 01**

**Lab Sample ID: 410-186028-1**

Date Collected: 08/21/24 09:08

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-8:2 FTS	100		50 - 200	09/06/24 10:46	09/09/24 21:18	1
13C3 PFHxS	107		50 - 200	09/06/24 10:46	09/09/24 21:18	1

**Client Sample ID: FB-01**

**Lab Sample ID: 410-186028-2**

Date Collected: 08/21/24 09:11

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<1.9		2.8	0.93	ng/L		09/06/24 10:46	09/09/24 21:31	1
Perfluoropentanoic acid (PFPeA)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
Perfluorohexanoic acid (PFHxA)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
Perfluoroheptanoic acid (PFHpA)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
Perfluorooctanoic acid (PFOA)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
Perfluorononanoic acid (PFNA)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
Perfluorodecanoic acid (PFDA)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
Perfluoroundecanoic acid (PFUnA)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
Perfluorododecanoic acid (PFDoA)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
Perfluorobutanesulfonic acid (PFBS)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
Perfluorohexanesulfonic acid (PFHxS)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
Perfluorooctanesulfonic acid (PFOS)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
Perfluoropentanesulfonic acid (PFPeS)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
11Cl-PF3OUdS	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.9		2.8	0.93	ng/L		09/06/24 10:46	09/09/24 21:31	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.4		1.9	0.46	ng/L		09/06/24 10:46	09/09/24 21:31	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C3 HFPO-DA	112		50 - 200	09/06/24 10:46	09/09/24 21:31	1			
13C4 PFBA	104		50 - 200	09/06/24 10:46	09/09/24 21:31	1			
13C3 PFBS	107		50 - 200	09/06/24 10:46	09/09/24 21:31	1			
13C5 PFPeA	95		50 - 200	09/06/24 10:46	09/09/24 21:31	1			
13C5 PFHxA	106		50 - 200	09/06/24 10:46	09/09/24 21:31	1			
13C4 PFHpA	105	M	50 - 200	09/06/24 10:46	09/09/24 21:31	1			

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: FB-01**

**Lab Sample ID: 410-186028-2**

Date Collected: 08/21/24 09:11

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOA	104		50 - 200	09/06/24 10:46	09/09/24 21:31	1
13C9 PFNA	103		50 - 200	09/06/24 10:46	09/09/24 21:31	1
13C6 PFDA	103		50 - 200	09/06/24 10:46	09/09/24 21:31	1
13C7 PFUnA	103		50 - 200	09/06/24 10:46	09/09/24 21:31	1
13C2 PFDoA	99		50 - 200	09/06/24 10:46	09/09/24 21:31	1
13C8 PFOS	101		50 - 200	09/06/24 10:46	09/09/24 21:31	1
M2-4:2 FTS	82		50 - 200	09/06/24 10:46	09/09/24 21:31	1
M2-6:2 FTS	90		50 - 200	09/06/24 10:46	09/09/24 21:31	1
M2-8:2 FTS	90		50 - 200	09/06/24 10:46	09/09/24 21:31	1
13C3 PFHxS	105		50 - 200	09/06/24 10:46	09/09/24 21:31	1

**Client Sample ID: Appleton-01**

**Lab Sample ID: 410-186028-3**

Date Collected: 08/21/24 11:47

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Perfluorobutanoic acid (PFBA)</b>	<b>1.3</b>	<b>J M</b>	2.9	0.95	ng/L		09/13/24 16:09	09/17/24 17:46	1
Perfluoropentanoic acid (PFPeA)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
Perfluorohexanoic acid (PFHxA)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
Perfluoroheptanoic acid (PFHpA)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
Perfluorooctanoic acid (PFOA)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
Perfluorononanoic acid (PFNA)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
Perfluorodecanoic acid (PFDA)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
Perfluoroundecanoic acid (PFUnA)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
Perfluorododecanoic acid (PFDoA)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
Perfluorobutanesulfonic acid (PFBS)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
Perfluorohexanesulfonic acid (PFHxS)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
Perfluorooctanesulfonic acid (PFOS)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
Perfluoropentanesulfonic acid (PFPeS)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
11Cl-PF3OUdS	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.9		2.9	0.95	ng/L		09/13/24 16:09	09/17/24 17:46	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Appleton-01**

**Lab Sample ID: 410-186028-3**

Date Collected: 08/21/24 11:47

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<1.4		1.9	0.48	ng/L		09/13/24 16:09	09/17/24 17:46	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	83		50 - 200				09/13/24 16:09	09/17/24 17:46	1
13C4 PFBA	103		50 - 200				09/13/24 16:09	09/17/24 17:46	1
13C3 PFBS	86		50 - 200				09/13/24 16:09	09/17/24 17:46	1
13C5 PFPeA	84		50 - 200				09/13/24 16:09	09/17/24 17:46	1
13C5 PFHxA	94		50 - 200				09/13/24 16:09	09/17/24 17:46	1
13C4 PFHpA	94		50 - 200				09/13/24 16:09	09/17/24 17:46	1
13C8 PFOA	93		50 - 200				09/13/24 16:09	09/17/24 17:46	1
13C9 PFNA	96		50 - 200				09/13/24 16:09	09/17/24 17:46	1
13C6 PFDA	90		50 - 200				09/13/24 16:09	09/17/24 17:46	1
13C7 PFUnA	89		50 - 200				09/13/24 16:09	09/17/24 17:46	1
13C2 PFDoA	86		50 - 200				09/13/24 16:09	09/17/24 17:46	1
13C8 PFOS	95		50 - 200				09/13/24 16:09	09/17/24 17:46	1
M2-4:2 FTS	86		50 - 200				09/13/24 16:09	09/17/24 17:46	1
M2-6:2 FTS	98		50 - 200				09/13/24 16:09	09/17/24 17:46	1
M2-8:2 FTS	100		50 - 200				09/13/24 16:09	09/17/24 17:46	1
13C3 PFHxS	102		50 - 200				09/13/24 16:09	09/17/24 17:46	1

**Client Sample ID: Ortonville-01**

**Lab Sample ID: 410-186028-4**

Date Collected: 08/21/24 13:15

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Perfluorobutanoic acid (PFBA)</b>	<b>0.86</b>	<b>J M</b>	2.6	0.85	ng/L		09/13/24 16:09	09/17/24 17:59	1
Perfluoropentanoic acid (PFPeA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
Perfluorohexanoic acid (PFHxA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
Perfluoroheptanoic acid (PFHpA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
Perfluorooctanoic acid (PFOA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
Perfluorononanoic acid (PFNA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
Perfluorodecanoic acid (PFDA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
<b>Perfluorobutanesulfonic acid (PFBS)</b>	<b>0.48</b>	<b>J</b>	1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
Perfluorohexanesulfonic acid (PFHxS)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
Perfluorooctanesulfonic acid (PFOS)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
Perfluoropentanesulfonic acid (PFPeS)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
11Cl-PF3OUdS	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1

Eurofins Lancaster Laboratories Environment Testing, LLC

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Ortenville-01**

**Lab Sample ID: 410-186028-4**

Date Collected: 08/21/24 13:15

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.7		2.6	0.85	ng/L		09/13/24 16:09	09/17/24 17:59	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 17:59	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	83		50 - 200				09/13/24 16:09	09/17/24 17:59	1
13C4 PFBA	90		50 - 200				09/13/24 16:09	09/17/24 17:59	1
13C3 PFBS	100		50 - 200				09/13/24 16:09	09/17/24 17:59	1
13C5 PFPeA	78		50 - 200				09/13/24 16:09	09/17/24 17:59	1
13C5 PFHxA	88		50 - 200				09/13/24 16:09	09/17/24 17:59	1
13C4 PFHpA	92		50 - 200				09/13/24 16:09	09/17/24 17:59	1
13C8 PFOA	86	M	50 - 200				09/13/24 16:09	09/17/24 17:59	1
13C9 PFNA	92		50 - 200				09/13/24 16:09	09/17/24 17:59	1
13C6 PFDA	92		50 - 200				09/13/24 16:09	09/17/24 17:59	1
13C7 PFUnA	92		50 - 200				09/13/24 16:09	09/17/24 17:59	1
13C2 PFDoA	88		50 - 200				09/13/24 16:09	09/17/24 17:59	1
13C8 PFOS	105		50 - 200				09/13/24 16:09	09/17/24 17:59	1
M2-4:2 FTS	96		50 - 200				09/13/24 16:09	09/17/24 17:59	1
M2-6:2 FTS	100		50 - 200				09/13/24 16:09	09/17/24 17:59	1
M2-8:2 FTS	104		50 - 200				09/13/24 16:09	09/17/24 17:59	1
13C3 PFHxS	113		50 - 200				09/13/24 16:09	09/17/24 17:59	1

**Client Sample ID: FD-01**

**Lab Sample ID: 410-186028-5**

Date Collected: 08/21/24 00:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<1.8		2.7	0.90	ng/L		09/13/24 16:09	09/17/24 18:13	1
Perfluoropentanoic acid (PFPeA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
Perfluorohexanoic acid (PFHxA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
Perfluoroheptanoic acid (PFHpA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
Perfluorooctanoic acid (PFOA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
Perfluorononanoic acid (PFNA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
Perfluorodecanoic acid (PFDA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
Perfluorobutanesulfonic acid (PFBS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
Perfluorohexanesulfonic acid (PFHxS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
Perfluorooctanesulfonic acid (PFOS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
Perfluoropentanesulfonic acid (PFPeS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1

Eurofins Lancaster Laboratories Environment Testing, LLC

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: FD-01**

**Lab Sample ID: 410-186028-5**

Date Collected: 08/21/24 00:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
11Cl-PF3OUdS	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.8		2.7	0.90	ng/L		09/13/24 16:09	09/17/24 18:13	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:13	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	86		50 - 200	09/13/24 16:09	09/17/24 18:13	1
13C4 PFBA	95		50 - 200	09/13/24 16:09	09/17/24 18:13	1
13C3 PFBS	88		50 - 200	09/13/24 16:09	09/17/24 18:13	1
13C5 PFPeA	93		50 - 200	09/13/24 16:09	09/17/24 18:13	1
13C5 PFHxA	83		50 - 200	09/13/24 16:09	09/17/24 18:13	1
13C4 PFHpA	97		50 - 200	09/13/24 16:09	09/17/24 18:13	1
13C8 PFOA	100		50 - 200	09/13/24 16:09	09/17/24 18:13	1
13C9 PFNA	102		50 - 200	09/13/24 16:09	09/17/24 18:13	1
13C6 PFDA	98		50 - 200	09/13/24 16:09	09/17/24 18:13	1
13C7 PFUnA	91		50 - 200	09/13/24 16:09	09/17/24 18:13	1
13C2 PFDoA	94		50 - 200	09/13/24 16:09	09/17/24 18:13	1
13C8 PFOS	102		50 - 200	09/13/24 16:09	09/17/24 18:13	1
M2-4:2 FTS	95		50 - 200	09/13/24 16:09	09/17/24 18:13	1
M2-6:2 FTS	102		50 - 200	09/13/24 16:09	09/17/24 18:13	1
M2-8:2 FTS	108		50 - 200	09/13/24 16:09	09/17/24 18:13	1
13C3 PFHxS	111		50 - 200	09/13/24 16:09	09/17/24 18:13	1

**Client Sample ID: Marshall-01**

**Lab Sample ID: 410-186028-6**

Date Collected: 08/22/24 08:25

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<1.8	M	2.7	0.89	ng/L		09/13/24 16:09	09/17/24 18:26	1
Perfluoropentanoic acid (PFPeA)	0.75	J	1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
Perfluorohexanoic acid (PFHxA)	0.75	J	1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
Perfluoroheptanoic acid (PFHpA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
Perfluorooctanoic acid (PFOA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
Perfluorononanoic acid (PFNA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
Perfluorodecanoic acid (PFDA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1

Eurofins Lancaster Laboratories Environment Testing, LLC



# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Marshall-01**

**Lab Sample ID: 410-186028-6**

Date Collected: 08/22/24 08:25

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroundecanoic acid (PFUnA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
<b>Perfluorobutanesulfonic acid (PFBS)</b>	<b>0.77</b>	<b>J</b>	1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
<b>Perfluorohexanesulfonic acid (PFHxS)</b>	<b>1.6</b>	<b>J M</b>	1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
Perfluorooctanesulfonic acid (PFOS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
<b>Perfluoropentanesulfonic acid (PFPeS)</b>	<b>0.51</b>	<b>J</b>	1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9CI-PF3ONS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
11CI-PF3OUdS	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.8		2.7	0.89	ng/L		09/13/24 16:09	09/17/24 18:26	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:26	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	86		50 - 200	09/13/24 16:09	09/17/24 18:26	1
13C4 PFBA	95		50 - 200	09/13/24 16:09	09/17/24 18:26	1
13C3 PFBS	102		50 - 200	09/13/24 16:09	09/17/24 18:26	1
13C5 PFPeA	87		50 - 200	09/13/24 16:09	09/17/24 18:26	1
13C5 PFHxA	86		50 - 200	09/13/24 16:09	09/17/24 18:26	1
13C4 PFHpA	92		50 - 200	09/13/24 16:09	09/17/24 18:26	1
13C8 PFOA	92		50 - 200	09/13/24 16:09	09/17/24 18:26	1
13C9 PFNA	92		50 - 200	09/13/24 16:09	09/17/24 18:26	1
13C6 PFDA	91		50 - 200	09/13/24 16:09	09/17/24 18:26	1
13C7 PFUnA	92		50 - 200	09/13/24 16:09	09/17/24 18:26	1
13C2 PFDoA	84		50 - 200	09/13/24 16:09	09/17/24 18:26	1
13C8 PFOS	98		50 - 200	09/13/24 16:09	09/17/24 18:26	1
M2-4:2 FTS	98		50 - 200	09/13/24 16:09	09/17/24 18:26	1
M2-6:2 FTS	101		50 - 200	09/13/24 16:09	09/17/24 18:26	1
M2-8:2 FTS	105		50 - 200	09/13/24 16:09	09/17/24 18:26	1
13C3 PFHxS	110		50 - 200	09/13/24 16:09	09/17/24 18:26	1

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: FB-02**

**Lab Sample ID: 410-186028-7**

**Date Collected: 08/22/24 08:30**

**Matrix: Drinking Water**

**Date Received: 08/28/24 09:50**

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<1.8		2.7	0.91	ng/L		09/13/24 16:09	09/17/24 18:40	1
Perfluoropentanoic acid (PFPeA)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
Perfluorohexanoic acid (PFHxA)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
Perfluoroheptanoic acid (PFHpA)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
Perfluorooctanoic acid (PFOA)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
Perfluorononanoic acid (PFNA)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
Perfluorodecanoic acid (PFDA)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
Perfluoroundecanoic acid (PFUnA)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
Perfluorododecanoic acid (PFDoA)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
Perfluorobutanesulfonic acid (PFBS)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
Perfluorohexanesulfonic acid (PFHxS)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
Perfluorooctanesulfonic acid (PFOS)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
Perfluoropentanesulfonic acid (PFPeS)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9CI-PF3ONS)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
11CI-PF3OUdS	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.8		2.7	0.91	ng/L		09/13/24 16:09	09/17/24 18:40	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.4		1.8	0.46	ng/L		09/13/24 16:09	09/17/24 18:40	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	97		50 - 200	09/13/24 16:09	09/17/24 18:40	1
13C4 PFBA	97		50 - 200	09/13/24 16:09	09/17/24 18:40	1
13C3 PFBS	116		50 - 200	09/13/24 16:09	09/17/24 18:40	1
13C5 PFPeA	83		50 - 200	09/13/24 16:09	09/17/24 18:40	1
13C5 PFHxA	99		50 - 200	09/13/24 16:09	09/17/24 18:40	1
13C4 PFHpA	97		50 - 200	09/13/24 16:09	09/17/24 18:40	1
13C8 PFOA	101		50 - 200	09/13/24 16:09	09/17/24 18:40	1
13C9 PFNA	104		50 - 200	09/13/24 16:09	09/17/24 18:40	1
13C6 PFDA	94		50 - 200	09/13/24 16:09	09/17/24 18:40	1
13C7 PFUnA	96		50 - 200	09/13/24 16:09	09/17/24 18:40	1
13C2 PFDoA	88		50 - 200	09/13/24 16:09	09/17/24 18:40	1
13C8 PFOS	106		50 - 200	09/13/24 16:09	09/17/24 18:40	1
M2-4:2 FTS	102		50 - 200	09/13/24 16:09	09/17/24 18:40	1
M2-6:2 FTS	102		50 - 200	09/13/24 16:09	09/17/24 18:40	1

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: FB-02**

**Lab Sample ID: 410-186028-7**

Date Collected: 08/22/24 08:30

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-8:2 FTS	108		50 - 200	09/13/24 16:09	09/17/24 18:40	1
13C3 PFHxS	115		50 - 200	09/13/24 16:09	09/17/24 18:40	1

**Client Sample ID: Pipestone-01**

**Lab Sample ID: 410-186028-8**

Date Collected: 08/22/24 09:52

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<1.8		2.7	0.91	ng/L		09/13/24 16:09	09/17/24 18:53	1
Perfluoropentanoic acid (PFPeA)	<1.4		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
Perfluorohexanoic acid (PFHxA)	<1.4		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
Perfluoroheptanoic acid (PFHpA)	<1.4		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
<b>Perfluorooctanoic acid (PFOA)</b>	<b>0.59</b>	<b>J M</b>	1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
Perfluorononanoic acid (PFNA)	<1.4		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
Perfluorodecanoic acid (PFDA)	<1.4		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
Perfluoroundecanoic acid (PFUnA)	<1.4		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
Perfluorododecanoic acid (PFDoA)	<1.4		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
<b>Perfluorobutanesulfonic acid (PFBS)</b>	<b>4.6</b>		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
<b>Perfluorohexanesulfonic acid (PFHxS)</b>	<b>0.72</b>	<b>J M</b>	1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.4		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
<b>Perfluorooctanesulfonic acid (PFOS)</b>	<b>0.58</b>	<b>J M</b>	1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
Perfluoropentanesulfonic acid (PFPeS)	<1.4		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9CI-PF3ONS)	<1.4		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.4		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
11Cl-PF3OUdS	<1.4		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.4		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.4		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.8		2.7	0.91	ng/L		09/13/24 16:09	09/17/24 18:53	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.4		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.4		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.4		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.4		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.4		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 18:53	1
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
13C3 HFPO-DA	88		50 - 200				09/13/24 16:09	09/17/24 18:53	1
13C4 PFBA	94		50 - 200				09/13/24 16:09	09/17/24 18:53	1
13C3 PFBS	105		50 - 200				09/13/24 16:09	09/17/24 18:53	1

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Client Sample ID: Pipestone-01

Lab Sample ID: 410-186028-8

Date Collected: 08/22/24 09:52

Matrix: Drinking Water

Date Received: 08/28/24 09:50

### Method: EPA 533 - EPA 533 Nov 2019 (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C5 PFPeA	83		50 - 200	09/13/24 16:09	09/17/24 18:53	1
13C5 PFHxA	97		50 - 200	09/13/24 16:09	09/17/24 18:53	1
13C4 PFHpA	95		50 - 200	09/13/24 16:09	09/17/24 18:53	1
13C8 PFOA	89		50 - 200	09/13/24 16:09	09/17/24 18:53	1
13C9 PFNA	97		50 - 200	09/13/24 16:09	09/17/24 18:53	1
13C6 PFDA	98		50 - 200	09/13/24 16:09	09/17/24 18:53	1
13C7 PFUnA	90		50 - 200	09/13/24 16:09	09/17/24 18:53	1
13C2 PFDoA	95		50 - 200	09/13/24 16:09	09/17/24 18:53	1
13C8 PFOS	102		50 - 200	09/13/24 16:09	09/17/24 18:53	1
M2-4:2 FTS	94		50 - 200	09/13/24 16:09	09/17/24 18:53	1
M2-6:2 FTS	99		50 - 200	09/13/24 16:09	09/17/24 18:53	1
M2-8:2 FTS	105		50 - 200	09/13/24 16:09	09/17/24 18:53	1
13C3 PFHxS	114		50 - 200	09/13/24 16:09	09/17/24 18:53	1

## Client Sample ID: Luverne-01

Lab Sample ID: 410-186028-9

Date Collected: 08/22/24 11:35

Matrix: Drinking Water

Date Received: 08/28/24 09:50

### Method: EPA 533 - EPA 533 Nov 2019

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Perfluorobutanoic acid (PFBA)</b>	<b>2.3</b>	<b>J M</b>	2.6	0.87	ng/L		09/13/24 16:09	09/17/24 19:07	1
Perfluoropentanoic acid (PFPeA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
Perfluorohexanoic acid (PFHxA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
Perfluoroheptanoic acid (PFHpA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
Perfluorooctanoic acid (PFOA)	<1.3	M	1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
Perfluorononanoic acid (PFNA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
Perfluorodecanoic acid (PFDA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
Perfluorobutanesulfonic acid (PFBS)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
Perfluorohexanesulfonic acid (PFHxS)	<1.3	M	1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
Perfluorooctanesulfonic acid (PFOS)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
Perfluoropentanesulfonic acid (PFPeS)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9CI-PF3ONS)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
11CI-PF3OUdS	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.7		2.6	0.87	ng/L		09/13/24 16:09	09/17/24 19:07	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Luverne-01**

**Lab Sample ID: 410-186028-9**

Date Collected: 08/22/24 11:35

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.3		1.7	0.43	ng/L		09/13/24 16:09	09/17/24 19:07	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	92		50 - 200				09/13/24 16:09	09/17/24 19:07	1
13C4 PFBA	97		50 - 200				09/13/24 16:09	09/17/24 19:07	1
13C3 PFBS	100		50 - 200				09/13/24 16:09	09/17/24 19:07	1
13C5 PFPeA	89		50 - 200				09/13/24 16:09	09/17/24 19:07	1
13C5 PFHxA	91		50 - 200				09/13/24 16:09	09/17/24 19:07	1
13C4 PFHpA	97		50 - 200				09/13/24 16:09	09/17/24 19:07	1
13C8 PFOA	101	M	50 - 200				09/13/24 16:09	09/17/24 19:07	1
13C9 PFNA	102		50 - 200				09/13/24 16:09	09/17/24 19:07	1
13C6 PFDA	96		50 - 200				09/13/24 16:09	09/17/24 19:07	1
13C7 PFUnA	89		50 - 200				09/13/24 16:09	09/17/24 19:07	1
13C2 PFDoA	91		50 - 200				09/13/24 16:09	09/17/24 19:07	1
13C8 PFOS	100		50 - 200				09/13/24 16:09	09/17/24 19:07	1
M2-4:2 FTS	87		50 - 200				09/13/24 16:09	09/17/24 19:07	1
M2-6:2 FTS	98		50 - 200				09/13/24 16:09	09/17/24 19:07	1
M2-8:2 FTS	102		50 - 200				09/13/24 16:09	09/17/24 19:07	1
13C3 PFHxS	108		50 - 200				09/13/24 16:09	09/17/24 19:07	1

**Client Sample ID: Jackson-01**

**Lab Sample ID: 410-186028-10**

Date Collected: 08/22/24 13:08

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<1.7		2.5	0.85	ng/L		09/13/24 16:09	09/17/24 19:20	1
Perfluoropentanoic acid (PFPeA)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
Perfluorohexanoic acid (PFHxA)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
Perfluoroheptanoic acid (PFHpA)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
Perfluorooctanoic acid (PFOA)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
Perfluorononanoic acid (PFNA)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
Perfluorodecanoic acid (PFDA)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
Perfluorobutanesulfonic acid (PFBS)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
Perfluorohexanesulfonic acid (PFHxS)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
Perfluorooctanesulfonic acid (PFOS)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
Perfluoropentanesulfonic acid (PFPeS)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9CI-PF3ONS)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
11CI-PF3OUdS	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Jackson-01**

**Lab Sample ID: 410-186028-10**

Date Collected: 08/22/24 13:08

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.7		2.5	0.85	ng/L		09/13/24 16:09	09/17/24 19:20	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<1.3		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 19:20	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	88		50 - 200				09/13/24 16:09	09/17/24 19:20	1
13C4 PFBA	100		50 - 200				09/13/24 16:09	09/17/24 19:20	1
13C3 PFBS	101		50 - 200				09/13/24 16:09	09/17/24 19:20	1
13C5 PFPeA	89		50 - 200				09/13/24 16:09	09/17/24 19:20	1
13C5 PFHxA	86		50 - 200				09/13/24 16:09	09/17/24 19:20	1
13C4 PFHpA	94		50 - 200				09/13/24 16:09	09/17/24 19:20	1
13C8 PFOA	100		50 - 200				09/13/24 16:09	09/17/24 19:20	1
13C9 PFNA	96	M	50 - 200				09/13/24 16:09	09/17/24 19:20	1
13C6 PFDA	99		50 - 200				09/13/24 16:09	09/17/24 19:20	1
13C7 PFUnA	91		50 - 200				09/13/24 16:09	09/17/24 19:20	1
13C2 PFDoA	87		50 - 200				09/13/24 16:09	09/17/24 19:20	1
13C8 PFOS	103		50 - 200				09/13/24 16:09	09/17/24 19:20	1
M2-4:2 FTS	97		50 - 200				09/13/24 16:09	09/17/24 19:20	1
M2-6:2 FTS	100		50 - 200				09/13/24 16:09	09/17/24 19:20	1
M2-8:2 FTS	98		50 - 200				09/13/24 16:09	09/17/24 19:20	1
13C3 PFHxS	111		50 - 200				09/13/24 16:09	09/17/24 19:20	1

**Client Sample ID: St James-01**

**Lab Sample ID: 410-186028-11**

Date Collected: 08/22/24 14:10

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<1.8	M	2.7	0.90	ng/L		09/13/24 16:09	09/17/24 19:47	1
Perfluoropentanoic acid (PFPeA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
Perfluorohexanoic acid (PFHxA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
Perfluoroheptanoic acid (PFHpA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
Perfluorooctanoic acid (PFOA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
Perfluorononanoic acid (PFNA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
Perfluorodecanoic acid (PFDA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
Perfluorobutanesulfonic acid (PFBS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
Perfluorohexanesulfonic acid (PFHxS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: St James-01**

**Lab Sample ID: 410-186028-11**

Date Collected: 08/22/24 14:10

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
Perfluorooctanesulfonic acid (PFOS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
Perfluoropentanesulfonic acid (PFPeS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
11Cl-PF3OUdS	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.8		2.7	0.90	ng/L		09/13/24 16:09	09/17/24 19:47	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.3		1.8	0.45	ng/L		09/13/24 16:09	09/17/24 19:47	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	96		50 - 200	09/13/24 16:09	09/17/24 19:47	1
13C4 PFBA	99		50 - 200	09/13/24 16:09	09/17/24 19:47	1
13C3 PFBS	102		50 - 200	09/13/24 16:09	09/17/24 19:47	1
13C5 PFPeA	88		50 - 200	09/13/24 16:09	09/17/24 19:47	1
13C5 PFHxA	94		50 - 200	09/13/24 16:09	09/17/24 19:47	1
13C4 PFHpA	98		50 - 200	09/13/24 16:09	09/17/24 19:47	1
13C8 PFOA	97		50 - 200	09/13/24 16:09	09/17/24 19:47	1
13C9 PFNA	100		50 - 200	09/13/24 16:09	09/17/24 19:47	1
13C6 PFDA	103		50 - 200	09/13/24 16:09	09/17/24 19:47	1
13C7 PFUnA	96		50 - 200	09/13/24 16:09	09/17/24 19:47	1
13C2 PFDoA	89		50 - 200	09/13/24 16:09	09/17/24 19:47	1
13C8 PFOS	102		50 - 200	09/13/24 16:09	09/17/24 19:47	1
M2-4:2 FTS	96		50 - 200	09/13/24 16:09	09/17/24 19:47	1
M2-6:2 FTS	99		50 - 200	09/13/24 16:09	09/17/24 19:47	1
M2-8:2 FTS	106		50 - 200	09/13/24 16:09	09/17/24 19:47	1
13C3 PFHxS	109		50 - 200	09/13/24 16:09	09/17/24 19:47	1

**Client Sample ID: Chanhassen-01**

**Lab Sample ID: 410-186028-12**

Date Collected: 08/22/24 10:50

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<1.8	M	2.6	0.88	ng/L		09/13/24 16:09	09/17/24 20:01	1
Perfluoropentanoic acid (PFPeA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
Perfluorohexanoic acid (PFHxA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1

Eurofins Lancaster Laboratories Environment Testing, LLC

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Chanhassen-01**

**Lab Sample ID: 410-186028-12**

**Date Collected: 08/22/24 10:50**

**Matrix: Drinking Water**

**Date Received: 08/28/24 09:50**

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
Perfluorooctanoic acid (PFOA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
Perfluorononanoic acid (PFNA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
Perfluorodecanoic acid (PFDA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
Perfluorobutanesulfonic acid (PFBS)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
Perfluorohexanesulfonic acid (PFHxS)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
Perfluorooctanesulfonic acid (PFOS)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
Perfluoropentanesulfonic acid (PFPeS)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9CI-PF3ONS)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
11CI-PF3OUdS	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.8		2.6	0.88	ng/L		09/13/24 16:09	09/17/24 20:01	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:01	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	95		50 - 200	09/13/24 16:09	09/17/24 20:01	1
13C4 PFBA	112		50 - 200	09/13/24 16:09	09/17/24 20:01	1
13C3 PFBS	101		50 - 200	09/13/24 16:09	09/17/24 20:01	1
13C5 PFPeA	97		50 - 200	09/13/24 16:09	09/17/24 20:01	1
13C5 PFHxA	97		50 - 200	09/13/24 16:09	09/17/24 20:01	1
13C4 PFHpA	99		50 - 200	09/13/24 16:09	09/17/24 20:01	1
13C8 PFOA	99		50 - 200	09/13/24 16:09	09/17/24 20:01	1
13C9 PFNA	100	M	50 - 200	09/13/24 16:09	09/17/24 20:01	1
13C6 PFDA	97		50 - 200	09/13/24 16:09	09/17/24 20:01	1
13C7 PFUnA	85		50 - 200	09/13/24 16:09	09/17/24 20:01	1
13C2 PFDoA	86		50 - 200	09/13/24 16:09	09/17/24 20:01	1
13C8 PFOS	101		50 - 200	09/13/24 16:09	09/17/24 20:01	1
M2-4:2 FTS	90		50 - 200	09/13/24 16:09	09/17/24 20:01	1
M2-6:2 FTS	103		50 - 200	09/13/24 16:09	09/17/24 20:01	1
M2-8:2 FTS	96		50 - 200	09/13/24 16:09	09/17/24 20:01	1
13C3 PFHxS	108		50 - 200	09/13/24 16:09	09/17/24 20:01	1



# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Lakeville-01**

**Lab Sample ID: 410-186028-13**

Date Collected: 08/22/24 11:20

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Perfluorobutanoic acid (PFBA)</b>	<b>5.5</b>	<b>M</b>	2.7	0.89	ng/L		09/13/24 16:09	09/17/24 20:28	1
Perfluoropentanoic acid (PFPeA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
Perfluorohexanoic acid (PFHxA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
Perfluoroheptanoic acid (PFHpA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
Perfluorooctanoic acid (PFOA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
Perfluorononanoic acid (PFNA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
Perfluorodecanoic acid (PFDA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
Perfluorobutanesulfonic acid (PFBS)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
Perfluorohexanesulfonic acid (PFHxS)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
Perfluorooctanesulfonic acid (PFOS)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
Perfluoropentanesulfonic acid (PFPeS)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9CI-PF3ONS)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
11CI-PF3OUdS	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.8		2.7	0.89	ng/L		09/13/24 16:09	09/17/24 20:28	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.3		1.8	0.44	ng/L		09/13/24 16:09	09/17/24 20:28	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	92		50 - 200	09/13/24 16:09	09/17/24 20:28	1
13C4 PFBA	100		50 - 200	09/13/24 16:09	09/17/24 20:28	1
13C3 PFBS	106		50 - 200	09/13/24 16:09	09/17/24 20:28	1
13C5 PFPeA	99		50 - 200	09/13/24 16:09	09/17/24 20:28	1
13C5 PFHxA	99		50 - 200	09/13/24 16:09	09/17/24 20:28	1
13C4 PFHpA	100	M	50 - 200	09/13/24 16:09	09/17/24 20:28	1
13C8 PFOA	99		50 - 200	09/13/24 16:09	09/17/24 20:28	1
13C9 PFNA	99		50 - 200	09/13/24 16:09	09/17/24 20:28	1
13C6 PFDA	101		50 - 200	09/13/24 16:09	09/17/24 20:28	1
13C7 PFUnA	89		50 - 200	09/13/24 16:09	09/17/24 20:28	1
13C2 PFDoA	82		50 - 200	09/13/24 16:09	09/17/24 20:28	1
13C8 PFOS	104		50 - 200	09/13/24 16:09	09/17/24 20:28	1
M2-4:2 FTS	101		50 - 200	09/13/24 16:09	09/17/24 20:28	1
M2-6:2 FTS	102		50 - 200	09/13/24 16:09	09/17/24 20:28	1

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Client Sample ID: Lakeville-01

Lab Sample ID: 410-186028-13

Date Collected: 08/22/24 11:20

Matrix: Drinking Water

Date Received: 08/28/24 09:50

### Method: EPA 533 - EPA 533 Nov 2019 (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-8:2 FTS	99		50 - 200	09/13/24 16:09	09/17/24 20:28	1
13C3 PFHxS	110		50 - 200	09/13/24 16:09	09/17/24 20:28	1

## Client Sample ID: Cottage Grove-01

Lab Sample ID: 410-186028-14

Date Collected: 08/22/24 12:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

### Method: EPA 533 - EPA 533 Nov 2019

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Perfluorobutanoic acid (PFBA)</b>	<b>4.4</b>	<b>M</b>	2.5	0.83	ng/L		09/13/24 16:09	09/17/24 20:41	1
Perfluoropentanoic acid (PFPeA)	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
Perfluorohexanoic acid (PFHxA)	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
Perfluoroheptanoic acid (PFHpA)	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
Perfluorooctanoic acid (PFOA)	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
Perfluorononanoic acid (PFNA)	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
Perfluorodecanoic acid (PFDA)	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
Perfluoroundecanoic acid (PFUnA)	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
Perfluorododecanoic acid (PFDoA)	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
<b>Perfluorobutanesulfonic acid (PFBS)</b>	<b>0.76</b>	<b>J</b>	1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
Perfluorohexanesulfonic acid (PFHxS)	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
Perfluorooctanesulfonic acid (PFOS)	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
<b>Perfluoropentanesulfonic acid (PFPeS)</b>	<b>0.44</b>	<b>J</b>	1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9CI-PF3ONS)	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
11CI-PF3OUdS	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.7		2.5	0.83	ng/L		09/13/24 16:09	09/17/24 20:41	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.2		1.7	0.42	ng/L		09/13/24 16:09	09/17/24 20:41	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C3 HFPO-DA	91		50 - 200	09/13/24 16:09	09/17/24 20:41	1			
13C4 PFBA	102		50 - 200	09/13/24 16:09	09/17/24 20:41	1			
13C3 PFBS	109		50 - 200	09/13/24 16:09	09/17/24 20:41	1			
13C5 PFPeA	85		50 - 200	09/13/24 16:09	09/17/24 20:41	1			
13C5 PFHxA	96	M	50 - 200	09/13/24 16:09	09/17/24 20:41	1			

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Cottage Grove-01**

**Lab Sample ID: 410-186028-14**

Date Collected: 08/22/24 12:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	102		50 - 200	09/13/24 16:09	09/17/24 20:41	1
13C8 PFOA	100		50 - 200	09/13/24 16:09	09/17/24 20:41	1
13C9 PFNA	104	M	50 - 200	09/13/24 16:09	09/17/24 20:41	1
13C6 PFDA	100		50 - 200	09/13/24 16:09	09/17/24 20:41	1
13C7 PFUnA	91		50 - 200	09/13/24 16:09	09/17/24 20:41	1
13C2 PFDoA	89		50 - 200	09/13/24 16:09	09/17/24 20:41	1
13C8 PFOS	100		50 - 200	09/13/24 16:09	09/17/24 20:41	1
M2-4:2 FTS	93		50 - 200	09/13/24 16:09	09/17/24 20:41	1
M2-6:2 FTS	94		50 - 200	09/13/24 16:09	09/17/24 20:41	1
M2-8:2 FTS	104		50 - 200	09/13/24 16:09	09/17/24 20:41	1
13C3 PFHxS	111		50 - 200	09/13/24 16:09	09/17/24 20:41	1

**Client Sample ID: Hastings-01**

**Lab Sample ID: 410-186028-15**

Date Collected: 08/22/24 13:52

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	8.2		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
Perfluorohexanoic acid (PFHxA)	3.0		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
Perfluoroheptanoic acid (PFHpA)	0.69	J	1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
Perfluorooctanoic acid (PFOA)	8.7	M	1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
Perfluorononanoic acid (PFNA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
Perfluorodecanoic acid (PFDA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
Perfluorobutanesulfonic acid (PFBS)	1.1	J	1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
Perfluorohexanesulfonic acid (PFHxS)	1.3	J M	1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
Perfluorooctanesulfonic acid (PFOS)	1.3	J M	1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
Perfluoropentanesulfonic acid (PFPeS)	<1.3	M	1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
11Cl-PF3OUdS	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.7		2.5	0.84	ng/L		09/06/24 09:44	09/10/24 05:37	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.65	J M	1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1

Eurofins Lancaster Laboratories Environment Testing, LLC

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Hastings-01**

**Lab Sample ID: 410-186028-15**

Date Collected: 08/22/24 13:52

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:37	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	92		50 - 200				09/06/24 09:44	09/10/24 05:37	1
13C4 PFBA	85		50 - 200				09/06/24 09:44	09/10/24 05:37	1
13C3 PFBS	100		50 - 200				09/06/24 09:44	09/10/24 05:37	1
13C5 PFPeA	88		50 - 200				09/06/24 09:44	09/10/24 05:37	1
13C5 PFHxA	87		50 - 200				09/06/24 09:44	09/10/24 05:37	1
13C4 PFHpA	90		50 - 200				09/06/24 09:44	09/10/24 05:37	1
13C8 PFOA	91		50 - 200				09/06/24 09:44	09/10/24 05:37	1
13C9 PFNA	90		50 - 200				09/06/24 09:44	09/10/24 05:37	1
13C6 PFDA	91		50 - 200				09/06/24 09:44	09/10/24 05:37	1
13C7 PFUnA	86		50 - 200				09/06/24 09:44	09/10/24 05:37	1
13C2 PFDoA	94		50 - 200				09/06/24 09:44	09/10/24 05:37	1
13C8 PFOS	91		50 - 200				09/06/24 09:44	09/10/24 05:37	1
M2-4:2 FTS	68		50 - 200				09/06/24 09:44	09/10/24 05:37	1
M2-6:2 FTS	78		50 - 200				09/06/24 09:44	09/10/24 05:37	1
M2-8:2 FTS	95		50 - 200				09/06/24 09:44	09/10/24 05:37	1
13C3 PFHxS	98		50 - 200				09/06/24 09:44	09/10/24 05:37	1

**Method: EPA 533 - EPA 533 Nov 2019 - DL**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	140	D	25	8.4	ng/L		09/06/24 09:44	09/10/24 22:37	10
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	100		50 - 200				09/06/24 09:44	09/10/24 22:37	10

**Client Sample ID: Red Wing-01**

**Lab Sample ID: 410-186028-16**

Date Collected: 08/22/24 14:32

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<1.7		2.5	0.84	ng/L		09/06/24 09:44	09/10/24 05:50	1
Perfluoropentanoic acid (PFPeA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
Perfluorohexanoic acid (PFHxA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
Perfluoroheptanoic acid (PFHpA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
Perfluorooctanoic acid (PFOA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
Perfluorononanoic acid (PFNA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
Perfluorodecanoic acid (PFDA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
Perfluorobutanesulfonic acid (PFBS)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
Perfluorohexanesulfonic acid (PFHxS)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
Perfluorooctanesulfonic acid (PFOS)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
Perfluoropentanesulfonic acid (PFPeS)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Red Wing-01**

**Lab Sample ID: 410-186028-16**

Date Collected: 08/22/24 14:32

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
11Cl-PF3OUdS	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.7		2.5	0.84	ng/L		09/06/24 09:44	09/10/24 05:50	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 05:50	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	97		50 - 200				09/06/24 09:44	09/10/24 05:50	1
13C4 PFBA	101		50 - 200				09/06/24 09:44	09/10/24 05:50	1
13C3 PFBS	106		50 - 200				09/06/24 09:44	09/10/24 05:50	1
13C5 PFPeA	97		50 - 200				09/06/24 09:44	09/10/24 05:50	1
13C5 PFHxA	93		50 - 200				09/06/24 09:44	09/10/24 05:50	1
13C4 PFHpA	95		50 - 200				09/06/24 09:44	09/10/24 05:50	1
13C8 PFOA	96		50 - 200				09/06/24 09:44	09/10/24 05:50	1
13C9 PFNA	97		50 - 200				09/06/24 09:44	09/10/24 05:50	1
13C6 PFDA	91		50 - 200				09/06/24 09:44	09/10/24 05:50	1
13C7 PFUnA	94		50 - 200				09/06/24 09:44	09/10/24 05:50	1
13C2 PFDoA	100		50 - 200				09/06/24 09:44	09/10/24 05:50	1
13C8 PFOS	101		50 - 200				09/06/24 09:44	09/10/24 05:50	1
M2-4:2 FTS	76		50 - 200				09/06/24 09:44	09/10/24 05:50	1
M2-6:2 FTS	87		50 - 200				09/06/24 09:44	09/10/24 05:50	1
M2-8:2 FTS	99		50 - 200				09/06/24 09:44	09/10/24 05:50	1
13C3 PFHxS	106		50 - 200				09/06/24 09:44	09/10/24 05:50	1

**Client Sample ID: Winona-01**

**Lab Sample ID: 410-186028-17**

Date Collected: 08/22/24 16:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<1.7	M	2.6	0.87	ng/L		09/06/24 09:44	09/10/24 06:04	1
Perfluoropentanoic acid (PFPeA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
Perfluorohexanoic acid (PFHxA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
Perfluoroheptanoic acid (PFHpA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
Perfluorooctanoic acid (PFOA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
Perfluorononanoic acid (PFNA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
Perfluorodecanoic acid (PFDA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1

Eurofins Lancaster Laboratories Environment Testing, LLC

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Winona-01**

**Lab Sample ID: 410-186028-17**

**Date Collected: 08/22/24 16:00**

**Matrix: Drinking Water**

**Date Received: 08/28/24 09:50**

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroundecanoic acid (PFUnA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
Perfluorobutanesulfonic acid (PFBS)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
Perfluorohexanesulfonic acid (PFHxS)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
Perfluorooctanesulfonic acid (PFOS)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
Perfluoropentanesulfonic acid (PFPeS)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
11Cl-PF3OUdS	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.7		2.6	0.87	ng/L		09/06/24 09:44	09/10/24 06:04	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:04	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	104		50 - 200	09/06/24 09:44	09/10/24 06:04	1
13C4 PFBA	103		50 - 200	09/06/24 09:44	09/10/24 06:04	1
13C3 PFBS	105		50 - 200	09/06/24 09:44	09/10/24 06:04	1
13C5 PFPeA	99	M	50 - 200	09/06/24 09:44	09/10/24 06:04	1
13C5 PFHxA	101		50 - 200	09/06/24 09:44	09/10/24 06:04	1
13C4 PFHpA	98		50 - 200	09/06/24 09:44	09/10/24 06:04	1
13C8 PFOA	103		50 - 200	09/06/24 09:44	09/10/24 06:04	1
13C9 PFNA	103		50 - 200	09/06/24 09:44	09/10/24 06:04	1
13C6 PFDA	108		50 - 200	09/06/24 09:44	09/10/24 06:04	1
13C7 PFUnA	99		50 - 200	09/06/24 09:44	09/10/24 06:04	1
13C2 PFDoA	103		50 - 200	09/06/24 09:44	09/10/24 06:04	1
13C8 PFOS	100		50 - 200	09/06/24 09:44	09/10/24 06:04	1
M2-4:2 FTS	77		50 - 200	09/06/24 09:44	09/10/24 06:04	1
M2-6:2 FTS	85		50 - 200	09/06/24 09:44	09/10/24 06:04	1
M2-8:2 FTS	104		50 - 200	09/06/24 09:44	09/10/24 06:04	1
13C3 PFHxS	107		50 - 200	09/06/24 09:44	09/10/24 06:04	1

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Owatonna-01**

**Lab Sample ID: 410-186028-18**

**Date Collected: 08/22/24 18:05**

**Matrix: Drinking Water**

**Date Received: 08/28/24 09:50**

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<1.7		2.6	0.86	ng/L		09/06/24 09:44	09/10/24 06:17	1
Perfluoropentanoic acid (PFPeA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
Perfluorohexanoic acid (PFHxA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
Perfluoroheptanoic acid (PFHpA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
Perfluorooctanoic acid (PFOA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
Perfluorononanoic acid (PFNA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
Perfluorodecanoic acid (PFDA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
Perfluorobutanesulfonic acid (PFBS)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
Perfluorohexanesulfonic acid (PFHxS)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
Perfluorooctanesulfonic acid (PFOS)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
Perfluoropentanesulfonic acid (PFPeS)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9CI-PF3ONS)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
11CI-PF3OUdS	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.7		2.6	0.86	ng/L		09/06/24 09:44	09/10/24 06:17	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:17	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	95		50 - 200	09/06/24 09:44	09/10/24 06:17	1
13C4 PFBA	95		50 - 200	09/06/24 09:44	09/10/24 06:17	1
13C3 PFBS	109		50 - 200	09/06/24 09:44	09/10/24 06:17	1
13C5 PFPeA	93		50 - 200	09/06/24 09:44	09/10/24 06:17	1
13C5 PFHxA	94		50 - 200	09/06/24 09:44	09/10/24 06:17	1
13C4 PFHpA	84		50 - 200	09/06/24 09:44	09/10/24 06:17	1
13C8 PFOA	86		50 - 200	09/06/24 09:44	09/10/24 06:17	1
13C9 PFNA	79		50 - 200	09/06/24 09:44	09/10/24 06:17	1
13C6 PFDA	75		50 - 200	09/06/24 09:44	09/10/24 06:17	1
13C7 PFUnA	83		50 - 200	09/06/24 09:44	09/10/24 06:17	1
13C2 PFDoA	88		50 - 200	09/06/24 09:44	09/10/24 06:17	1
13C8 PFOS	101		50 - 200	09/06/24 09:44	09/10/24 06:17	1
M2-4:2 FTS	81		50 - 200	09/06/24 09:44	09/10/24 06:17	1
M2-6:2 FTS	88		50 - 200	09/06/24 09:44	09/10/24 06:17	1

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Client Sample ID: Owatonna-01

Lab Sample ID: 410-186028-18

Date Collected: 08/22/24 18:05

Matrix: Drinking Water

Date Received: 08/28/24 09:50

### Method: EPA 533 - EPA 533 Nov 2019 (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-8:2 FTS	91		50 - 200	09/06/24 09:44	09/10/24 06:17	1
13C3 PFHxS	110		50 - 200	09/06/24 09:44	09/10/24 06:17	1

## Client Sample ID: FD-03

Lab Sample ID: 410-186028-19

Date Collected: 08/22/24 00:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

### Method: EPA 533 - EPA 533 Nov 2019

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<1.7		2.5	0.85	ng/L		09/06/24 09:44	09/10/24 06:31	1
Perfluoropentanoic acid (PFPeA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
Perfluorohexanoic acid (PFHxA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
Perfluoroheptanoic acid (PFHpA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
Perfluorooctanoic acid (PFOA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
Perfluorononanoic acid (PFNA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
Perfluorodecanoic acid (PFDA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
Perfluorobutanesulfonic acid (PFBS)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
Perfluorohexanesulfonic acid (PFHxS)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
Perfluorooctanesulfonic acid (PFOS)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
Perfluoropentanesulfonic acid (PFPeS)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
11Cl-PF3OUdS	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.7		2.5	0.85	ng/L		09/06/24 09:44	09/10/24 06:31	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.3		1.7	0.42	ng/L		09/06/24 09:44	09/10/24 06:31	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
13C3 HFPO-DA	99		50 - 200	09/06/24 09:44	09/10/24 06:31	1			
13C4 PFBA	106		50 - 200	09/06/24 09:44	09/10/24 06:31	1			
13C3 PFBS	110		50 - 200	09/06/24 09:44	09/10/24 06:31	1			
13C5 PFPeA	107		50 - 200	09/06/24 09:44	09/10/24 06:31	1			
13C5 PFHxA	99		50 - 200	09/06/24 09:44	09/10/24 06:31	1			
13C4 PFHpA	93	M	50 - 200	09/06/24 09:44	09/10/24 06:31	1			



# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: FD-03**

**Lab Sample ID: 410-186028-19**

Date Collected: 08/22/24 00:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOA	100		50 - 200	09/06/24 09:44	09/10/24 06:31	1
13C9 PFNA	98		50 - 200	09/06/24 09:44	09/10/24 06:31	1
13C6 PFDA	89		50 - 200	09/06/24 09:44	09/10/24 06:31	1
13C7 PFUnA	88		50 - 200	09/06/24 09:44	09/10/24 06:31	1
13C2 PFDoA	97		50 - 200	09/06/24 09:44	09/10/24 06:31	1
13C8 PFOS	99		50 - 200	09/06/24 09:44	09/10/24 06:31	1
M2-4:2 FTS	81		50 - 200	09/06/24 09:44	09/10/24 06:31	1
M2-6:2 FTS	86		50 - 200	09/06/24 09:44	09/10/24 06:31	1
M2-8:2 FTS	96		50 - 200	09/06/24 09:44	09/10/24 06:31	1
13C3 PFHxS	108		50 - 200	09/06/24 09:44	09/10/24 06:31	1

**Client Sample ID: FD-02**

**Lab Sample ID: 410-186028-20**

Date Collected: 08/21/24 00:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	3.7	M	2.6	0.86	ng/L		09/06/24 09:44	09/10/24 06:44	1
Perfluoropentanoic acid (PFPeA)	1.0	J	1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
Perfluorohexanoic acid (PFHxA)	0.82	J M	1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
Perfluoroheptanoic acid (PFHpA)	<1.3	M	1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
Perfluorooctanoic acid (PFOA)	0.67	J M	1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
Perfluorononanoic acid (PFNA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
Perfluorodecanoic acid (PFDA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
Perfluorobutanesulfonic acid (PFBS)	2.9		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
Perfluorohexanesulfonic acid (PFHxS)	2.6	M	1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
Perfluorooctanesulfonic acid (PFOS)	2.4	M	1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
Perfluoropentanesulfonic acid (PFPeS)	0.59	J	1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
11Cl-PF3OUdS	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.7		2.6	0.86	ng/L		09/06/24 09:44	09/10/24 06:44	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1

Eurofins Lancaster Laboratories Environment Testing, LLC

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: FD-02**

**Lab Sample ID: 410-186028-20**

Date Collected: 08/21/24 00:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.3		1.7	0.43	ng/L		09/06/24 09:44	09/10/24 06:44	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	97		50 - 200				09/06/24 09:44	09/10/24 06:44	1
13C4 PFBA	102		50 - 200				09/06/24 09:44	09/10/24 06:44	1
13C3 PFBS	93		50 - 200				09/06/24 09:44	09/10/24 06:44	1
13C5 PFPeA	113		50 - 200				09/06/24 09:44	09/10/24 06:44	1
13C5 PFHxA	91	M	50 - 200				09/06/24 09:44	09/10/24 06:44	1
13C4 PFHpA	93		50 - 200				09/06/24 09:44	09/10/24 06:44	1
13C8 PFOA	97	M	50 - 200				09/06/24 09:44	09/10/24 06:44	1
13C9 PFNA	96		50 - 200				09/06/24 09:44	09/10/24 06:44	1
13C6 PFDA	94		50 - 200				09/06/24 09:44	09/10/24 06:44	1
13C7 PFUnA	94		50 - 200				09/06/24 09:44	09/10/24 06:44	1
13C2 PFDoA	92		50 - 200				09/06/24 09:44	09/10/24 06:44	1
13C8 PFOS	96		50 - 200				09/06/24 09:44	09/10/24 06:44	1
M2-4:2 FTS	89		50 - 200				09/06/24 09:44	09/10/24 06:44	1
M2-6:2 FTS	86		50 - 200				09/06/24 09:44	09/10/24 06:44	1
M2-8:2 FTS	102		50 - 200				09/06/24 09:44	09/10/24 06:44	1
13C3 PFHxS	98		50 - 200				09/06/24 09:44	09/10/24 06:44	1

**Client Sample ID: Sauk Center-01**

**Lab Sample ID: 410-186028-21**

Date Collected: 08/20/24 10:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	3.6	M	2.5	0.84	ng/L		09/06/24 16:07	09/10/24 23:58	1
Perfluoropentanoic acid (PFPeA)	0.62	J M	1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
Perfluorohexanoic acid (PFHxA)	0.53	J M	1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
Perfluoroheptanoic acid (PFHpA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
Perfluorooctanoic acid (PFOA)	1.0	J M	1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
Perfluorononanoic acid (PFNA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
Perfluorodecanoic acid (PFDA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
Perfluorobutanesulfonic acid (PFBS)	1.6	J	1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
Perfluorohexanesulfonic acid (PFHxS)	0.85	J M	1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
Perfluorooctanesulfonic acid (PFOS)	1.2	J M	1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
Perfluoropentanesulfonic acid (PFPeS)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
11Cl-PF3OUdS	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1

Eurofins Lancaster Laboratories Environment Testing, LLC

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Sauk Center-01**

**Lab Sample ID: 410-186028-21**

Date Collected: 08/20/24 10:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.7		2.5	0.84	ng/L		09/06/24 16:07	09/10/24 23:58	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
Nonafluoro-3,6-dioxahexanoic acid (NFDHA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/10/24 23:58	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	91		50 - 200				09/06/24 16:07	09/10/24 23:58	1
13C4 PFBA	103		50 - 200				09/06/24 16:07	09/10/24 23:58	1
13C3 PFBS	100		50 - 200				09/06/24 16:07	09/10/24 23:58	1
13C5 PFPeA	107		50 - 200				09/06/24 16:07	09/10/24 23:58	1
13C5 PFHxA	93		50 - 200				09/06/24 16:07	09/10/24 23:58	1
13C4 PFHpA	96		50 - 200				09/06/24 16:07	09/10/24 23:58	1
13C8 PFOA	93		50 - 200				09/06/24 16:07	09/10/24 23:58	1
13C9 PFNA	92		50 - 200				09/06/24 16:07	09/10/24 23:58	1
13C6 PFDA	93		50 - 200				09/06/24 16:07	09/10/24 23:58	1
13C7 PFUnA	93		50 - 200				09/06/24 16:07	09/10/24 23:58	1
13C2 PFDoA	92		50 - 200				09/06/24 16:07	09/10/24 23:58	1
13C8 PFOS	101		50 - 200				09/06/24 16:07	09/10/24 23:58	1
M2-4:2 FTS	108		50 - 200				09/06/24 16:07	09/10/24 23:58	1
M2-6:2 FTS	100		50 - 200				09/06/24 16:07	09/10/24 23:58	1
M2-8:2 FTS	103		50 - 200				09/06/24 16:07	09/10/24 23:58	1
13C3 PFHxS	105		50 - 200				09/06/24 16:07	09/10/24 23:58	1

**Client Sample ID: FB-03**

**Lab Sample ID: 410-186028-22**

Date Collected: 08/20/24 10:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<1.9		2.8	0.93	ng/L		09/06/24 16:07	09/11/24 00:11	1
Perfluoropentanoic acid (PFPeA)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
Perfluorohexanoic acid (PFHxA)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
Perfluoroheptanoic acid (PFHpA)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
Perfluorooctanoic acid (PFOA)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
Perfluorononanoic acid (PFNA)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
Perfluorodecanoic acid (PFDA)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
Perfluoroundecanoic acid (PFUnA)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
Perfluorododecanoic acid (PFDoA)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
Perfluorobutanesulfonic acid (PFBS)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
Perfluorohexanesulfonic acid (PFHxS)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: FB-03**

**Lab Sample ID: 410-186028-22**

Date Collected: 08/20/24 10:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid (PFHpS)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
Perfluorooctanesulfonic acid (PFOS)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
Perfluoropentanesulfonic acid (PFPeS)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
11Cl-PF3OUdS	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.9		2.8	0.93	ng/L		09/06/24 16:07	09/11/24 00:11	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.4		1.9	0.46	ng/L		09/06/24 16:07	09/11/24 00:11	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	97		50 - 200	09/06/24 16:07	09/11/24 00:11	1
13C4 PFBA	100		50 - 200	09/06/24 16:07	09/11/24 00:11	1
13C3 PFBS	113		50 - 200	09/06/24 16:07	09/11/24 00:11	1
13C5 PFPeA	97		50 - 200	09/06/24 16:07	09/11/24 00:11	1
13C5 PFHxA	99		50 - 200	09/06/24 16:07	09/11/24 00:11	1
13C4 PFHpA	101		50 - 200	09/06/24 16:07	09/11/24 00:11	1
13C8 PFOA	103		50 - 200	09/06/24 16:07	09/11/24 00:11	1
13C9 PFNA	100		50 - 200	09/06/24 16:07	09/11/24 00:11	1
13C6 PFDA	103		50 - 200	09/06/24 16:07	09/11/24 00:11	1
13C7 PFUnA	87		50 - 200	09/06/24 16:07	09/11/24 00:11	1
13C2 PFDoA	92		50 - 200	09/06/24 16:07	09/11/24 00:11	1
13C8 PFOS	107		50 - 200	09/06/24 16:07	09/11/24 00:11	1
M2-4:2 FTS	105		50 - 200	09/06/24 16:07	09/11/24 00:11	1
M2-6:2 FTS	108		50 - 200	09/06/24 16:07	09/11/24 00:11	1
M2-8:2 FTS	106		50 - 200	09/06/24 16:07	09/11/24 00:11	1
13C3 PFHxS	106		50 - 200	09/06/24 16:07	09/11/24 00:11	1

**Client Sample ID: Alexandria-01**

**Lab Sample ID: 410-186028-23**

Date Collected: 08/20/24 11:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.0	M	2.5	0.82	ng/L		09/06/24 16:07	09/11/24 00:25	1
Perfluoropentanoic acid (PFPeA)	1.4	J M	1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
Perfluorohexanoic acid (PFHxA)	3.2		1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1

Eurofins Lancaster Laboratories Environment Testing, LLC

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Alexandria-01**

**Lab Sample ID: 410-186028-23**

Date Collected: 08/20/24 11:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	0.59	J	1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
Perfluorooctanoic acid (PFOA)	2.4	M	1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
Perfluorononanoic acid (PFNA)	<1.2		1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
Perfluorodecanoic acid (PFDA)	<1.2		1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
Perfluoroundecanoic acid (PFUnA)	<1.2		1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
Perfluorododecanoic acid (PFDoA)	<1.2		1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
Perfluorobutanesulfonic acid (PFBS)	2.7	M	1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
Perfluorohexanesulfonic acid (PFHxS)	8.6	M	1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.2		1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
Perfluorooctanesulfonic acid (PFOS)	2.8	M	1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
Perfluoropentanesulfonic acid (PFPeS)	1.9		1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.2		1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.2		1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
11Cl-PF3OUdS	<1.2		1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.2		1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.2		1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.6		2.5	0.82	ng/L		09/06/24 16:07	09/11/24 00:25	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.2		1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.2		1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.2		1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.2		1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEASA)	<1.2		1.6	0.41	ng/L		09/06/24 16:07	09/11/24 00:25	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	87		50 - 200	09/06/24 16:07	09/11/24 00:25	1
13C4 PFBA	93		50 - 200	09/06/24 16:07	09/11/24 00:25	1
13C3 PFBS	95		50 - 200	09/06/24 16:07	09/11/24 00:25	1
13C5 PFPeA	97		50 - 200	09/06/24 16:07	09/11/24 00:25	1
13C5 PFHxA	90		50 - 200	09/06/24 16:07	09/11/24 00:25	1
13C4 PFHpA	90		50 - 200	09/06/24 16:07	09/11/24 00:25	1
13C8 PFOA	89		50 - 200	09/06/24 16:07	09/11/24 00:25	1
13C9 PFNA	89		50 - 200	09/06/24 16:07	09/11/24 00:25	1
13C6 PFDA	84		50 - 200	09/06/24 16:07	09/11/24 00:25	1
13C7 PFUnA	87		50 - 200	09/06/24 16:07	09/11/24 00:25	1
13C2 PFDoA	76		50 - 200	09/06/24 16:07	09/11/24 00:25	1
13C8 PFOS	96		50 - 200	09/06/24 16:07	09/11/24 00:25	1
M2-4:2 FTS	98		50 - 200	09/06/24 16:07	09/11/24 00:25	1
M2-6:2 FTS	100		50 - 200	09/06/24 16:07	09/11/24 00:25	1
M2-8:2 FTS	97		50 - 200	09/06/24 16:07	09/11/24 00:25	1

Eurofins Lancaster Laboratories Environment Testing, LLC

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Client Sample ID: Alexandria-01

Lab Sample ID: 410-186028-23

Date Collected: 08/20/24 11:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

### Method: EPA 533 - EPA 533 Nov 2019 (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	98		50 - 200	09/06/24 16:07	09/11/24 00:25	1

## Client Sample ID: Fergus Falls-01

Lab Sample ID: 410-186028-24

Date Collected: 08/20/24 12:05

Matrix: Drinking Water

Date Received: 08/28/24 09:50

### Method: EPA 533 - EPA 533 Nov 2019

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	3.5	M	2.6	0.87	ng/L		09/06/24 16:07	09/11/24 00:52	1
Perfluoropentanoic acid (PFPeA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
Perfluorohexanoic acid (PFHxA)	<1.3	M	1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
Perfluoroheptanoic acid (PFHpA)	0.45	J	1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
Perfluorooctanoic acid (PFOA)	0.47	J M	1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
Perfluorononanoic acid (PFNA)	<1.3	M	1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
Perfluorodecanoic acid (PFDA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
Perfluorobutanesulfonic acid (PFBS)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
Perfluorohexanesulfonic acid (PFHxS)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
Perfluorooctanesulfonic acid (PFOS)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
Perfluoropentanesulfonic acid (PFPeS)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
11Cl-PF3OUdS	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.7		2.6	0.87	ng/L		09/06/24 16:07	09/11/24 00:52	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 00:52	1

  

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	88		50 - 200	09/06/24 16:07	09/11/24 00:52	1
13C4 PFBA	95		50 - 200	09/06/24 16:07	09/11/24 00:52	1
13C3 PFBS	90		50 - 200	09/06/24 16:07	09/11/24 00:52	1
13C5 PFPeA	95		50 - 200	09/06/24 16:07	09/11/24 00:52	1
13C5 PFHxA	87		50 - 200	09/06/24 16:07	09/11/24 00:52	1
13C4 PFHpA	96		50 - 200	09/06/24 16:07	09/11/24 00:52	1
13C8 PFOA	94		50 - 200	09/06/24 16:07	09/11/24 00:52	1

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Fergus Falls-01**

**Lab Sample ID: 410-186028-24**

Date Collected: 08/20/24 12:05

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C9 PFNA	97		50 - 200	09/06/24 16:07	09/11/24 00:52	1
13C6 PFDA	102		50 - 200	09/06/24 16:07	09/11/24 00:52	1
13C7 PFUnA	89		50 - 200	09/06/24 16:07	09/11/24 00:52	1
13C2 PFDoA	92		50 - 200	09/06/24 16:07	09/11/24 00:52	1
13C8 PFOS	101		50 - 200	09/06/24 16:07	09/11/24 00:52	1
M2-4:2 FTS	101		50 - 200	09/06/24 16:07	09/11/24 00:52	1
M2-6:2 FTS	104		50 - 200	09/06/24 16:07	09/11/24 00:52	1
M2-8:2 FTS	111		50 - 200	09/06/24 16:07	09/11/24 00:52	1
13C3 PFHxS	101		50 - 200	09/06/24 16:07	09/11/24 00:52	1

**Client Sample ID: Cambridge-01**

**Lab Sample ID: 410-186028-25**

Date Collected: 08/21/24 09:10

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<1.7	M	2.6	0.87	ng/L		09/06/24 16:07	09/11/24 01:05	1
Perfluoropentanoic acid (PFPeA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
Perfluorohexanoic acid (PFHxA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
Perfluoroheptanoic acid (PFHpA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
Perfluorooctanoic acid (PFOA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
Perfluorononanoic acid (PFNA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
Perfluorodecanoic acid (PFDA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
Perfluorobutanesulfonic acid (PFBS)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
Perfluorohexanesulfonic acid (PFHxS)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
Perfluorooctanesulfonic acid (PFOS)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
Perfluoropentanesulfonic acid (PFPeS)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
11Cl-PF3OUdS	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.7		2.6	0.87	ng/L		09/06/24 16:07	09/11/24 01:05	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.3		1.7	0.44	ng/L		09/06/24 16:07	09/11/24 01:05	1

Eurofins Lancaster Laboratories Environment Testing, LLC

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Client Sample ID: Cambridge-01

## Lab Sample ID: 410-186028-25

Date Collected: 08/21/24 09:10

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	91		50 - 200	09/06/24 16:07	09/11/24 01:05	1
13C4 PFBA	101		50 - 200	09/06/24 16:07	09/11/24 01:05	1
13C3 PFBS	99		50 - 200	09/06/24 16:07	09/11/24 01:05	1
13C5 PFPeA	99		50 - 200	09/06/24 16:07	09/11/24 01:05	1
13C5 PFHxA	96		50 - 200	09/06/24 16:07	09/11/24 01:05	1
13C4 PFHpA	95	M	50 - 200	09/06/24 16:07	09/11/24 01:05	1
13C8 PFOA	98		50 - 200	09/06/24 16:07	09/11/24 01:05	1
13C9 PFNA	99		50 - 200	09/06/24 16:07	09/11/24 01:05	1
13C6 PFDA	95		50 - 200	09/06/24 16:07	09/11/24 01:05	1
13C7 PFUnA	94		50 - 200	09/06/24 16:07	09/11/24 01:05	1
13C2 PFDoA	90		50 - 200	09/06/24 16:07	09/11/24 01:05	1
13C8 PFOS	102		50 - 200	09/06/24 16:07	09/11/24 01:05	1
M2-4:2 FTS	98		50 - 200	09/06/24 16:07	09/11/24 01:05	1
M2-6:2 FTS	105		50 - 200	09/06/24 16:07	09/11/24 01:05	1
M2-8:2 FTS	109		50 - 200	09/06/24 16:07	09/11/24 01:05	1
13C3 PFHxS	103		50 - 200	09/06/24 16:07	09/11/24 01:05	1

## Client Sample ID: FB-04

## Lab Sample ID: 410-186028-26

Date Collected: 08/21/24 09:10

Matrix: Drinking Water

Date Received: 08/28/24 09:50

### Method: EPA 533 - EPA 533 Nov 2019

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<1.8		2.8	0.92	ng/L		09/06/24 16:07	09/11/24 01:18	1
Perfluoropentanoic acid (PFPeA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
Perfluorohexanoic acid (PFHxA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
Perfluoroheptanoic acid (PFHpA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
Perfluorooctanoic acid (PFOA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
Perfluorononanoic acid (PFNA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
Perfluorodecanoic acid (PFDA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
Perfluoroundecanoic acid (PFUnA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
Perfluorododecanoic acid (PFDoA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
Perfluorobutanesulfonic acid (PFBS)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
Perfluorohexanesulfonic acid (PFHxS)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
Perfluorooctanesulfonic acid (PFOS)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
Perfluoropentanesulfonic acid (PFPeS)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9CI-PF3ONS)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
11CI-PF3OUdS	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.8		2.8	0.92	ng/L		09/06/24 16:07	09/11/24 01:18	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1



# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: FB-04**

**Lab Sample ID: 410-186028-26**

**Date Collected: 08/21/24 09:10**

**Matrix: Drinking Water**

**Date Received: 08/28/24 09:50**

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Nonfluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 01:18	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	93		50 - 200				09/06/24 16:07	09/11/24 01:18	1
13C4 PFBA	104		50 - 200				09/06/24 16:07	09/11/24 01:18	1
13C3 PFBS	107		50 - 200				09/06/24 16:07	09/11/24 01:18	1
13C5 PFPeA	99		50 - 200				09/06/24 16:07	09/11/24 01:18	1
13C5 PFHxA	101		50 - 200				09/06/24 16:07	09/11/24 01:18	1
13C4 PFHpA	103		50 - 200				09/06/24 16:07	09/11/24 01:18	1
13C8 PFOA	100	M	50 - 200				09/06/24 16:07	09/11/24 01:18	1
13C9 PFNA	104	M	50 - 200				09/06/24 16:07	09/11/24 01:18	1
13C6 PFDA	97		50 - 200				09/06/24 16:07	09/11/24 01:18	1
13C7 PFUnA	94		50 - 200				09/06/24 16:07	09/11/24 01:18	1
13C2 PFDoA	99		50 - 200				09/06/24 16:07	09/11/24 01:18	1
13C8 PFOS	102		50 - 200				09/06/24 16:07	09/11/24 01:18	1
M2-4:2 FTS	105		50 - 200				09/06/24 16:07	09/11/24 01:18	1
M2-6:2 FTS	106		50 - 200				09/06/24 16:07	09/11/24 01:18	1
M2-8:2 FTS	105		50 - 200				09/06/24 16:07	09/11/24 01:18	1
13C3 PFHxS	106		50 - 200				09/06/24 16:07	09/11/24 01:18	1

**Client Sample ID: Hibbring-01**

**Lab Sample ID: 410-186028-27**

**Date Collected: 08/21/24 14:20**

**Matrix: Drinking Water**

**Date Received: 08/28/24 09:50**

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<1.7	M	2.5	0.84	ng/L		09/06/24 16:07	09/11/24 01:32	1
Perfluoropentanoic acid (PFPeA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
Perfluorohexanoic acid (PFHxA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
Perfluoroheptanoic acid (PFHpA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
Perfluorooctanoic acid (PFOA)	<1.3	M	1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
Perfluorononanoic acid (PFNA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
Perfluorodecanoic acid (PFDA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
Perfluorobutanesulfonic acid (PFBS)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
Perfluorohexanesulfonic acid (PFHxS)	<1.3	M	1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
<b>Perfluorooctanesulfonic acid (PFOS)</b>	<b>0.43</b>	<b>J M</b>	1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
Perfluoropentanesulfonic acid (PFPeS)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Hibbring-01**

**Lab Sample ID: 410-186028-27**

Date Collected: 08/21/24 14:20

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
11Cl-PF3OUdS	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.7		2.5	0.84	ng/L		09/06/24 16:07	09/11/24 01:32	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.3		1.7	0.42	ng/L		09/06/24 16:07	09/11/24 01:32	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	91		50 - 200				09/06/24 16:07	09/11/24 01:32	1
13C4 PFBA	97		50 - 200				09/06/24 16:07	09/11/24 01:32	1
13C3 PFBS	96		50 - 200				09/06/24 16:07	09/11/24 01:32	1
13C5 PFPeA	100		50 - 200				09/06/24 16:07	09/11/24 01:32	1
13C5 PFHxA	97		50 - 200				09/06/24 16:07	09/11/24 01:32	1
13C4 PFHpA	100		50 - 200				09/06/24 16:07	09/11/24 01:32	1
13C8 PFOA	93		50 - 200				09/06/24 16:07	09/11/24 01:32	1
13C9 PFNA	90	M	50 - 200				09/06/24 16:07	09/11/24 01:32	1
13C6 PFDA	82		50 - 200				09/06/24 16:07	09/11/24 01:32	1
13C7 PFUnA	86		50 - 200				09/06/24 16:07	09/11/24 01:32	1
13C2 PFDoA	84		50 - 200				09/06/24 16:07	09/11/24 01:32	1
13C8 PFOS	103		50 - 200				09/06/24 16:07	09/11/24 01:32	1
M2-4:2 FTS	110		50 - 200				09/06/24 16:07	09/11/24 01:32	1
M2-6:2 FTS	105		50 - 200				09/06/24 16:07	09/11/24 01:32	1
M2-8:2 FTS	106		50 - 200				09/06/24 16:07	09/11/24 01:32	1
13C3 PFHxS	100		50 - 200				09/06/24 16:07	09/11/24 01:32	1

**Client Sample ID: Chisholm-01**

**Lab Sample ID: 410-186028-28**

Date Collected: 08/21/24 14:50

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	1.7	J M	2.6	0.86	ng/L		09/06/24 16:07	09/11/24 01:45	1
Perfluoropentanoic acid (PFPeA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
Perfluorohexanoic acid (PFHxA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
Perfluoroheptanoic acid (PFHpA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
Perfluorooctanoic acid (PFOA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
Perfluorononanoic acid (PFNA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
Perfluorodecanoic acid (PFDA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1

Eurofins Lancaster Laboratories Environment Testing, LLC

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Chisholm-01**

**Lab Sample ID: 410-186028-28**

Date Collected: 08/21/24 14:50

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
Perfluorohexanesulfonic acid (PFHxS)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
Perfluorooctanesulfonic acid (PFOS)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
Perfluoropentanesulfonic acid (PFPeS)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
11Cl-PF3OUdS	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.7		2.6	0.86	ng/L		09/06/24 16:07	09/11/24 01:45	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:45	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	92		50 - 200	09/06/24 16:07	09/11/24 01:45	1
13C4 PFBA	102		50 - 200	09/06/24 16:07	09/11/24 01:45	1
13C3 PFBS	106		50 - 200	09/06/24 16:07	09/11/24 01:45	1
13C5 PFPeA	106		50 - 200	09/06/24 16:07	09/11/24 01:45	1
13C5 PFHxA	100		50 - 200	09/06/24 16:07	09/11/24 01:45	1
13C4 PFHpA	99		50 - 200	09/06/24 16:07	09/11/24 01:45	1
13C8 PFOA	101		50 - 200	09/06/24 16:07	09/11/24 01:45	1
13C9 PFNA	99		50 - 200	09/06/24 16:07	09/11/24 01:45	1
13C6 PFDA	100		50 - 200	09/06/24 16:07	09/11/24 01:45	1
13C7 PFUnA	96		50 - 200	09/06/24 16:07	09/11/24 01:45	1
13C2 PFDoA	96		50 - 200	09/06/24 16:07	09/11/24 01:45	1
13C8 PFOS	103		50 - 200	09/06/24 16:07	09/11/24 01:45	1
M2-4:2 FTS	109		50 - 200	09/06/24 16:07	09/11/24 01:45	1
M2-6:2 FTS	106		50 - 200	09/06/24 16:07	09/11/24 01:45	1
M2-8:2 FTS	110		50 - 200	09/06/24 16:07	09/11/24 01:45	1
13C3 PFHxS	108		50 - 200	09/06/24 16:07	09/11/24 01:45	1

**Client Sample ID: Brainerd-01**

**Lab Sample ID: 410-186028-29**

Date Collected: 08/21/24 17:40

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	3.6	M	2.6	0.85	ng/L		09/06/24 16:07	09/11/24 01:59	1

Eurofins Lancaster Laboratories Environment Testing, LLC

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Brainerd-01**

**Lab Sample ID: 410-186028-29**

Date Collected: 08/21/24 17:40

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanoic acid (PFPeA)	1.1	J	1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
Perfluorohexanoic acid (PFHxA)	0.87	J M	1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
Perfluoroheptanoic acid (PFHpA)	<1.3	M	1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
Perfluorooctanoic acid (PFOA)	0.75	J M	1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
Perfluorononanoic acid (PFNA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
Perfluorodecanoic acid (PFDA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
Perfluorobutanesulfonic acid (PFBS)	2.8		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
Perfluorohexanesulfonic acid (PFHxS)	2.4	M	1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
Perfluorooctanesulfonic acid (PFOS)	2.5		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
Perfluoropentanesulfonic acid (PFPeS)	0.58	J	1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
11Cl-PF3OUdS	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.7		2.6	0.85	ng/L		09/06/24 16:07	09/11/24 01:59	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.3		1.7	0.43	ng/L		09/06/24 16:07	09/11/24 01:59	1
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
13C3 HFPO-DA	86		50 - 200				09/06/24 16:07	09/11/24 01:59	1
13C4 PFBA	95		50 - 200				09/06/24 16:07	09/11/24 01:59	1
13C3 PFBS	92		50 - 200				09/06/24 16:07	09/11/24 01:59	1
13C5 PFPeA	103		50 - 200				09/06/24 16:07	09/11/24 01:59	1
13C5 PFHxA	84		50 - 200				09/06/24 16:07	09/11/24 01:59	1
13C4 PFHpA	96		50 - 200				09/06/24 16:07	09/11/24 01:59	1
13C8 PFOA	92		50 - 200				09/06/24 16:07	09/11/24 01:59	1
13C9 PFNA	95		50 - 200				09/06/24 16:07	09/11/24 01:59	1
13C6 PFDA	98		50 - 200				09/06/24 16:07	09/11/24 01:59	1
13C7 PFUnA	89		50 - 200				09/06/24 16:07	09/11/24 01:59	1
13C2 PFDoA	92		50 - 200				09/06/24 16:07	09/11/24 01:59	1
13C8 PFOS	98		50 - 200				09/06/24 16:07	09/11/24 01:59	1
M2-4:2 FTS	104		50 - 200				09/06/24 16:07	09/11/24 01:59	1

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Client Sample ID: Brainerd-01

Lab Sample ID: 410-186028-29

Date Collected: 08/21/24 17:40

Matrix: Drinking Water

Date Received: 08/28/24 09:50

### Method: EPA 533 - EPA 533 Nov 2019 (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-6:2 FTS	105		50 - 200	09/06/24 16:07	09/11/24 01:59	1
M2-8:2 FTS	105		50 - 200	09/06/24 16:07	09/11/24 01:59	1
13C3 PFHxS	102		50 - 200	09/06/24 16:07	09/11/24 01:59	1

## Client Sample ID: Monticello-01

Lab Sample ID: 410-186028-30

Date Collected: 08/22/24 08:55

Matrix: Drinking Water

Date Received: 08/28/24 09:50

### Method: EPA 533 - EPA 533 Nov 2019

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Perfluorobutanoic acid (PFBA)</b>	<b>3.9</b>	<b>M</b>	2.6	0.88	ng/L		09/06/24 16:07	09/11/24 02:12	1
Perfluoropentanoic acid (PFPeA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
Perfluorohexanoic acid (PFHxA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
Perfluoroheptanoic acid (PFHpA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
Perfluorooctanoic acid (PFOA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
Perfluorononanoic acid (PFNA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
Perfluorodecanoic acid (PFDA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
Perfluorobutanesulfonic acid (PFBS)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
Perfluorohexanesulfonic acid (PFHxS)	<1.3	M	1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
Perfluorooctanesulfonic acid (PFOS)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
Perfluoropentanesulfonic acid (PFPeS)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
11Cl-PF3OUdS	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.8		2.6	0.88	ng/L		09/06/24 16:07	09/11/24 02:12	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:12	1

  

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	95		50 - 200	09/06/24 16:07	09/11/24 02:12	1
13C4 PFBA	102		50 - 200	09/06/24 16:07	09/11/24 02:12	1
13C3 PFBS	102		50 - 200	09/06/24 16:07	09/11/24 02:12	1
13C5 PFPeA	107		50 - 200	09/06/24 16:07	09/11/24 02:12	1
13C5 PFHxA	103	M	50 - 200	09/06/24 16:07	09/11/24 02:12	1

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Monticello-01**

**Lab Sample ID: 410-186028-30**

Date Collected: 08/22/24 08:55

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFHpA	103		50 - 200	09/06/24 16:07	09/11/24 02:12	1
13C8 PFOA	98		50 - 200	09/06/24 16:07	09/11/24 02:12	1
13C9 PFNA	92		50 - 200	09/06/24 16:07	09/11/24 02:12	1
13C6 PFDA	94		50 - 200	09/06/24 16:07	09/11/24 02:12	1
13C7 PFUnA	95		50 - 200	09/06/24 16:07	09/11/24 02:12	1
13C2 PFDoA	98		50 - 200	09/06/24 16:07	09/11/24 02:12	1
13C8 PFOS	101		50 - 200	09/06/24 16:07	09/11/24 02:12	1
M2-4:2 FTS	110		50 - 200	09/06/24 16:07	09/11/24 02:12	1
M2-6:2 FTS	108		50 - 200	09/06/24 16:07	09/11/24 02:12	1
M2-8:2 FTS	107		50 - 200	09/06/24 16:07	09/11/24 02:12	1
13C3 PFHxS	104		50 - 200	09/06/24 16:07	09/11/24 02:12	1

**Client Sample ID: FB-05**

**Lab Sample ID: 410-186028-31**

Date Collected: 08/22/24 08:55

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<1.8		2.8	0.92	ng/L		09/06/24 16:07	09/11/24 02:39	1
Perfluoropentanoic acid (PFPeA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
Perfluorohexanoic acid (PFHxA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
Perfluoroheptanoic acid (PFHpA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
Perfluorooctanoic acid (PFOA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
Perfluorononanoic acid (PFNA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
Perfluorodecanoic acid (PFDA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
Perfluoroundecanoic acid (PFUnA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
Perfluorododecanoic acid (PFDoA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
Perfluorobutanesulfonic acid (PFBS)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
Perfluorohexanesulfonic acid (PFHxS)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
Perfluorooctanesulfonic acid (PFOS)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
Perfluoropentanesulfonic acid (PFPeS)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
11Cl-PF3OUdS	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.8		2.8	0.92	ng/L		09/06/24 16:07	09/11/24 02:39	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1

Eurofins Lancaster Laboratories Environment Testing, LLC

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: FB-05**

**Lab Sample ID: 410-186028-31**

Date Collected: 08/22/24 08:55

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEA)	<1.4		1.8	0.46	ng/L		09/06/24 16:07	09/11/24 02:39	1
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
13C3 HFPO-DA	96		50 - 200				09/06/24 16:07	09/11/24 02:39	1
13C4 PFBA	101		50 - 200				09/06/24 16:07	09/11/24 02:39	1
13C3 PFBS	113		50 - 200				09/06/24 16:07	09/11/24 02:39	1
13C5 PFPeA	102		50 - 200				09/06/24 16:07	09/11/24 02:39	1
13C5 PFHxA	101		50 - 200				09/06/24 16:07	09/11/24 02:39	1
13C4 PFHpA	99		50 - 200				09/06/24 16:07	09/11/24 02:39	1
13C8 PFOA	99		50 - 200				09/06/24 16:07	09/11/24 02:39	1
13C9 PFNA	99		50 - 200				09/06/24 16:07	09/11/24 02:39	1
13C6 PFDA	97		50 - 200				09/06/24 16:07	09/11/24 02:39	1
13C7 PFUnA	99		50 - 200				09/06/24 16:07	09/11/24 02:39	1
13C2 PFDoA	96		50 - 200				09/06/24 16:07	09/11/24 02:39	1
13C8 PFOS	107		50 - 200				09/06/24 16:07	09/11/24 02:39	1
M2-4:2 FTS	111		50 - 200				09/06/24 16:07	09/11/24 02:39	1
M2-6:2 FTS	106		50 - 200				09/06/24 16:07	09/11/24 02:39	1
M2-8:2 FTS	109		50 - 200				09/06/24 16:07	09/11/24 02:39	1
13C3 PFHxS	110		50 - 200				09/06/24 16:07	09/11/24 02:39	1

**Client Sample ID: Pine City**

**Lab Sample ID: 410-186028-32**

Date Collected: 08/21/24 10:15

Matrix: Drinking Water

Date Received: 08/28/24 09:50

**Method: EPA 533 - EPA 533 Nov 2019**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	2.6	M	2.6	0.88	ng/L		09/06/24 16:07	09/11/24 02:53	1
Perfluoropentanoic acid (PFPeA)	1.7	J M	1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
Perfluorohexanoic acid (PFHxA)	3.7	M	1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
Perfluoroheptanoic acid (PFHpA)	1.1	J M	1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
Perfluorooctanoic acid (PFOA)	5.8	M	1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
Perfluorononanoic acid (PFNA)	<1.3	M	1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
Perfluorodecanoic acid (PFDA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
Perfluoroundecanoic acid (PFUnA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
Perfluorododecanoic acid (PFDoA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
Perfluorobutanesulfonic acid (PFBS)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
Perfluorohexanesulfonic acid (PFHxS)	1.4	J M	1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
Perfluorooctanesulfonic acid (PFOS)	1.8	M	1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
Perfluoropentanesulfonic acid (PFPeS)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9CI-PF3ONS)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
11CI-PF3OUdS	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1

# Client Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Pine City**

**Lab Sample ID: 410-186028-32**

**Date Collected: 08/21/24 10:15**

**Matrix: Drinking Water**

**Date Received: 08/28/24 09:50**

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<1.8		2.6	0.88	ng/L		09/06/24 16:07	09/11/24 02:53	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.3		1.8	0.44	ng/L		09/06/24 16:07	09/11/24 02:53	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	89		50 - 200				09/06/24 16:07	09/11/24 02:53	1
13C4 PFBA	103		50 - 200				09/06/24 16:07	09/11/24 02:53	1
13C3 PFBS	92		50 - 200				09/06/24 16:07	09/11/24 02:53	1
13C5 PFPeA	105		50 - 200				09/06/24 16:07	09/11/24 02:53	1
13C5 PFHxA	93		50 - 200				09/06/24 16:07	09/11/24 02:53	1
13C4 PFHpA	98		50 - 200				09/06/24 16:07	09/11/24 02:53	1
13C8 PFOA	98		50 - 200				09/06/24 16:07	09/11/24 02:53	1
13C9 PFNA	94		50 - 200				09/06/24 16:07	09/11/24 02:53	1
13C6 PFDA	96		50 - 200				09/06/24 16:07	09/11/24 02:53	1
13C7 PFUnA	90		50 - 200				09/06/24 16:07	09/11/24 02:53	1
13C2 PFDoA	93		50 - 200				09/06/24 16:07	09/11/24 02:53	1
13C8 PFOS	100		50 - 200				09/06/24 16:07	09/11/24 02:53	1
M2-4:2 FTS	96		50 - 200				09/06/24 16:07	09/11/24 02:53	1
M2-6:2 FTS	105		50 - 200				09/06/24 16:07	09/11/24 02:53	1
M2-8:2 FTS	103		50 - 200				09/06/24 16:07	09/11/24 02:53	1
13C3 PFHxS	103		50 - 200				09/06/24 16:07	09/11/24 02:53	1



# Isotope Dilution Summary

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Method: EPA 533 - EPA 533 Nov 2019**

**Matrix: Drinking Water**

**Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (50-200)	PFBA (50-200)	C3PFBS (50-200)	PFPeA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)
410-186028-1	Olivia 01	93	101	95	115	96	97	100	95
410-186028-2	FB-01	112	104	107	95	106	105 M	104	103
410-186028-3	Appleton-01	83	103	86	84	94	94	93	96
410-186028-4	Ortenville-01	83	90	100	78	88	92	86 M	92
410-186028-5	FD-01	86	95	88	93	83	97	100	102
410-186028-6	Marshall-01	86	95	102	87	86	92	92	92
410-186028-7	FB-02	97	97	116	83	99	97	101	104
410-186028-8	Pipestone-01	88	94	105	83	97	95	89	97
410-186028-9	Luverne-01	92	97	100	89	91	97	101 M	102
410-186028-10	Jackson-01	88	100	101	89	86	94	100	96 M
410-186028-11	St James-01	96	99	102	88	94	98	97	100
410-186028-12	Chanhassen-01	95	112	101	97	97	99	99	100 M
410-186028-13	Lakeville-01	92	100	106	99	99	100 M	99	99
410-186028-14	Cottage Grove-01	91	102	109	85	96 M	102	100	104 M
410-186028-15	Hastings-01	92	85	100	88	87	90	91	90
410-186028-15 - DL	Hastings-01		100						
410-186028-16	Red Wing-01	97	101	106	97	93	95	96	97
410-186028-17	Winona-01	104	103	105	99 M	101	98	103	103
410-186028-18	Owatonna-01	95	95	109	93	94	84	86	79
410-186028-19	FD-03	99	106	110	107	99	93 M	100	98
410-186028-20	FD-02	97	102	93	113	91 M	93	97 M	96
410-186028-21	Sauk Center-01	91	103	100	107	93	96	93	92
410-186028-22	FB-03	97	100	113	97	99	101	103	100
410-186028-23	Alexandria-01	87	93	95	97	90	90	89	89
410-186028-24	Fergus Falls-01	88	95	90	95	87	96	94	97
410-186028-25	Cambridge-01	91	101	99	99	96	95 M	98	99
410-186028-26	FB-04	93	104	107	99	101	103	100 M	104 M
410-186028-27	Hibbring-01	91	97	96	100	97	100	93	90 M
410-186028-28	Chisholm-01	92	102	106	106	100	99	101	99
410-186028-29	Brainerd-01	86	95	92	103	84	96	92	95
410-186028-30	Monticello-01	95	102	102	107	103 M	103	98	92
410-186028-31	FB-05	96	101	113	102	101	99	99	99
410-186028-32	Pine City	89	103	92	105	93	98	98	94
LCS 410-548577/2-A	Lab Control Sample	104	105	113	98	102	96	104	100
LCS 410-548739/2-A	Lab Control Sample	96	105	107	98	98	103	99	101 M
LCS 410-549787/2-A	Lab Control Sample	109	104	106	97	104	101	107	108
LCS 410-551313/2-A	Lab Control Sample	91	95	111	80	103 M	101	97	103
LCSD 410-548739/3-A	Lab Control Sample Dup	100	103	104	100	105	110	107	108
LCSD 410-551313/3-A	Lab Control Sample Dup	91	97	111	81	96	97	93	94
MB 410-548577/1-A	Method Blank	106	109	110	102	100	98	103	101
MB 410-548739/1-A	Method Blank	99	110	110	112	106	105	107	108
MB 410-549787/1-A	Method Blank	111	108	112	100	106 M	106	108	105
MB 410-551313/1-A	Method Blank	96	94	102	81	95 M	96	97	100 M
		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	C6PFDA (50-200)	13C7PUA (50-200)	PFDoA (50-200)	C8PFOS (50-200)	M242FTS (50-200)	M262FTS (50-200)	M282FTS (50-200)	C3PFHS (50-200)
410-186028-1	Olivia 01	101	94	96	100	86	89	100	107
410-186028-2	FB-01	103	103	99	101	82	90	90	105
410-186028-3	Appleton-01	90	89	86	95	86	98	100	102

# Isotope Dilution Summary

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Method: EPA 533 - EPA 533 Nov 2019 (Continued)**

**Matrix: Drinking Water**

**Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		C6PFDA (50-200)	13C7PUA (50-200)	PFD <sub>o</sub> A (50-200)	C8PFOS (50-200)	M242FTS (50-200)	M262FTS (50-200)	M282FTS (50-200)	C3PFHS (50-200)
410-186028-4	Ortenville-01	92	92	88	105	96	100	104	113
410-186028-5	FD-01	98	91	94	102	95	102	108	111
410-186028-6	Marshall-01	91	92	84	98	98	101	105	110
410-186028-7	FB-02	94	96	88	106	102	102	108	115
410-186028-8	Pipestone-01	98	90	95	102	94	99	105	114
410-186028-9	Luverne-01	96	89	91	100	87	98	102	108
410-186028-10	Jackson-01	99	91	87	103	97	100	98	111
410-186028-11	St James-01	103	96	89	102	96	99	106	109
410-186028-12	Chanhassen-01	97	85	86	101	90	103	96	108
410-186028-13	Lakeville-01	101	89	82	104	101	102	99	110
410-186028-14	Cottage Grove-01	100	91	89	100	93	94	104	111
410-186028-15	Hastings-01	91	86	94	91	68	78	95	98
410-186028-15 - DL	Hastings-01								
410-186028-16	Red Wing-01	91	94	100	101	76	87	99	106
410-186028-17	Winona-01	108	99	103	100	77	85	104	107
410-186028-18	Owatonna-01	75	83	88	101	81	88	91	110
410-186028-19	FD-03	89	88	97	99	81	86	96	108
410-186028-20	FD-02	94	94	92	96	89	86	102	98
410-186028-21	Sauk Center-01	93	93	92	101	108	100	103	105
410-186028-22	FB-03	103	87	92	107	105	108	106	106
410-186028-23	Alexandria-01	84	87	76	96	98	100	97	98
410-186028-24	Fergus Falls-01	102	89	92	101	101	104	111	101
410-186028-25	Cambridge-01	95	94	90	102	98	105	109	103
410-186028-26	FB-04	97	94	99	102	105	106	105	106
410-186028-27	Hibbring-01	82	86	84	103	110	105	106	100
410-186028-28	Chisholm-01	100	96	96	103	109	106	110	108
410-186028-29	Brainerd-01	98	89	92	98	104	105	105	102
410-186028-30	Monticello-01	94	95	98	101	110	108	107	104
410-186028-31	FB-05	97	99	96	107	111	106	109	110
410-186028-32	Pine City	96	90	93	100	96	105	103	103
LCS 410-548577/2-A	Lab Control Sample	100	93	106	103	80	91	104	113
LCS 410-548739/2-A	Lab Control Sample	103	98	95	110	111	113	110	111
LCS 410-549787/2-A	Lab Control Sample	105	100	104	105	85	87	101	110
LCS 410-551313/2-A	Lab Control Sample	92	88	93	104	102	98	101	110
LCSD 410-548739/3-A	Lab Control Sample Dup	111	106	100	103	99	107	107	107
LCSD 410-551313/3-A	Lab Control Sample Dup	95	89	81	101	94	102	100	113
MB 410-548577/1-A	Method Blank	99	94	100	104	86	92	99	114
MB 410-548739/1-A	Method Blank	108	108	103	112	114	112	118	114
MB 410-549787/1-A	Method Blank	105	109	109	100	85	91	104	108
MB 410-551313/1-A	Method Blank	88	92	86	101	94	94	89	108

**Surrogate Legend**

- HFPODA = 13C3 HFPO-DA
- PFBA = 13C4 PFBA
- C3PFBS = 13C3 PFBS
- PFPeA = 13C5 PFPeA
- 13C5PHA = 13C5 PFHxA
- C4PFHA = 13C4 PFHpA
- C8PFOA = 13C8 PFOA
- C9PFNA = 13C9 PFNA

# Isotope Dilution Summary

Client: MN Dept of Military Affairs Facilities Management Office

Job ID: 410-186028-1

Project/Site: 533 in drinking water

C6PFDA = 13C6 PFDA

13C7PUA = 13C7 PFUnA

PFD<sub>o</sub>A = 13C2 PFD<sub>o</sub>A

C8PFOS = 13C8 PFOS

M242FTS = M2-4:2 FTS

M262FTS = M2-6:2 FTS

M282FTS = M2-8:2 FTS

C3PFHS = 13C3 PFHxS



# QC Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Method: EPA 533 - EPA 533 Nov 2019

**Lab Sample ID: MB 410-548577/1-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 549278**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 548577**

Analyte	MB	MB	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorobutanoic acid (PFBA)	<2.0		3.0	1.0	ng/L		09/06/24 09:44	09/10/24 01:47	1
Perfluoropentanoic acid (PFPeA)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
Perfluorohexanoic acid (PFHxA)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
Perfluoroheptanoic acid (PFHpA)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
Perfluorooctanoic acid (PFOA)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
Perfluorononanoic acid (PFNA)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
Perfluorodecanoic acid (PFDA)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
Perfluoroundecanoic acid (PFUnA)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
Perfluorododecanoic acid (PFDoA)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
Perfluorobutanesulfonic acid (PFBS)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
Perfluorohexanesulfonic acid (PFHxS)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
Perfluorooctanesulfonic acid (PFOS)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
Perfluoropentanesulfonic acid (PFPeS)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9CI-PF3ONS)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
11CI-PF3OUdS	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<2.0		3.0	1.0	ng/L		09/06/24 09:44	09/10/24 01:47	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.5		2.0	0.50	ng/L		09/06/24 09:44	09/10/24 01:47	1

Isotope Dilution	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C3 HFPO-DA	106		50 - 200	09/06/24 09:44	09/10/24 01:47	1
13C4 PFBA	109		50 - 200	09/06/24 09:44	09/10/24 01:47	1
13C3 PFBS	110		50 - 200	09/06/24 09:44	09/10/24 01:47	1
13C5 PFPeA	102		50 - 200	09/06/24 09:44	09/10/24 01:47	1
13C5 PFHxA	100		50 - 200	09/06/24 09:44	09/10/24 01:47	1
13C4 PFHpA	98		50 - 200	09/06/24 09:44	09/10/24 01:47	1
13C8 PFOA	103		50 - 200	09/06/24 09:44	09/10/24 01:47	1
13C9 PFNA	101		50 - 200	09/06/24 09:44	09/10/24 01:47	1
13C6 PFDA	99		50 - 200	09/06/24 09:44	09/10/24 01:47	1
13C7 PFUnA	94		50 - 200	09/06/24 09:44	09/10/24 01:47	1
13C2 PFDoA	100		50 - 200	09/06/24 09:44	09/10/24 01:47	1
13C8 PFOS	104		50 - 200	09/06/24 09:44	09/10/24 01:47	1

## QC Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

### Method: EPA 533 - EPA 533 Nov 2019 (Continued)

**Lab Sample ID: MB 410-548577/1-A**

**Matrix: Drinking Water**

**Analysis Batch: 549278**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 548577**

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
M2-4:2 FTS	86		50 - 200	09/06/24 09:44	09/10/24 01:47	1
M2-6:2 FTS	92		50 - 200	09/06/24 09:44	09/10/24 01:47	1
M2-8:2 FTS	99		50 - 200	09/06/24 09:44	09/10/24 01:47	1
13C3 PFHxS	114		50 - 200	09/06/24 09:44	09/10/24 01:47	1

**Lab Sample ID: LCS 410-548577/2-A**

**Matrix: Drinking Water**

**Analysis Batch: 549278**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 548577**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanoic acid (PFPeA)	10.0	9.17	M	ng/L		92	70 - 130
Perfluorohexanoic acid (PFHxA)	10.0	8.72		ng/L		87	70 - 130
Perfluoroheptanoic acid (PFHpA)	10.0	9.18		ng/L		92	70 - 130
Perfluorooctanoic acid (PFOA)	10.0	8.94		ng/L		89	70 - 130
Perfluorononanoic acid (PFNA)	10.0	9.39		ng/L		94	70 - 130
Perfluorodecanoic acid (PFDA)	10.0	8.85		ng/L		89	70 - 130
Perfluoroundecanoic acid (PFUnA)	10.0	9.81		ng/L		98	70 - 130
Perfluorododecanoic acid (PFDoA)	10.0	8.83		ng/L		88	70 - 130
Perfluorobutanesulfonic acid (PFBS)	8.85	7.23		ng/L		82	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	9.12	7.70	M	ng/L		84	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	9.52	8.68		ng/L		91	70 - 130
Perfluorooctanesulfonic acid (PFOS)	9.26	8.07	M	ng/L		87	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	9.38	8.06		ng/L		86	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	9.30	7.85		ng/L		84	70 - 130
Hexafluoropropylene oxide dimer acid (HFPO DA)	10.0	8.80		ng/L		88	70 - 130
11Cl-PF3OUdS	9.30	8.52		ng/L		92	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	9.45	8.97		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	9.34	8.56		ng/L		92	70 - 130
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	9.48	8.24		ng/L		87	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	9.58	8.21		ng/L		86	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	10.0	9.51		ng/L		95	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	10.0	9.56		ng/L		96	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	10.0	8.85		ng/L		89	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	8.90	7.59		ng/L		85	70 - 130

# QC Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Method: EPA 533 - EPA 533 Nov 2019 (Continued)

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	104		50 - 200
13C4 PFBA	105		50 - 200
13C3 PFBS	113		50 - 200
13C5 PFPeA	98		50 - 200
13C5 PFHxA	102		50 - 200
13C4 PFHpA	96		50 - 200
13C8 PFOA	104		50 - 200
13C9 PFNA	100		50 - 200
13C6 PFDA	100		50 - 200
13C7 PFUnA	93		50 - 200
13C2 PFDoA	106		50 - 200
13C8 PFOS	103		50 - 200
M2-4:2 FTS	80		50 - 200
M2-6:2 FTS	91		50 - 200
M2-8:2 FTS	104		50 - 200
13C3 PFHxS	113		50 - 200

Lab Sample ID: MB 410-548739/1-A

Matrix: Drinking Water

Analysis Batch: 549952

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 548739

Analyte	MB MB		LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorobutanoic acid (PFBA)	<2.0		3.0	1.0	ng/L		09/06/24 16:07	09/10/24 23:04	1
Perfluoropentanoic acid (PFPeA)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
Perfluorohexanoic acid (PFHxA)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
Perfluoroheptanoic acid (PFHpA)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
Perfluorooctanoic acid (PFOA)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
Perfluorononanoic acid (PFNA)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
Perfluorodecanoic acid (PFDA)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
Perfluoroundecanoic acid (PFUnA)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
Perfluorododecanoic acid (PFDoA)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
Perfluorobutanesulfonic acid (PFBS)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
Perfluorohexanesulfonic acid (PFHxS)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
Perfluorooctanesulfonic acid (PFOS)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
Perfluoropentanesulfonic acid (PFPeS)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
11Cl-PF3OUdS	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<2.0		3.0	1.0	ng/L		09/06/24 16:07	09/10/24 23:04	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1

# QC Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Method: EPA 533 - EPA 533 Nov 2019 (Continued)

**Lab Sample ID: MB 410-548739/1-A**

**Matrix: Drinking Water**

**Analysis Batch: 549952**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 548739**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<1.5		2.0	0.50	ng/L		09/06/24 16:07	09/10/24 23:04	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	99		50 - 200	09/06/24 16:07	09/10/24 23:04	1
13C4 PFBA	110		50 - 200	09/06/24 16:07	09/10/24 23:04	1
13C3 PFBS	110		50 - 200	09/06/24 16:07	09/10/24 23:04	1
13C5 PFPeA	112		50 - 200	09/06/24 16:07	09/10/24 23:04	1
13C5 PFHxA	106		50 - 200	09/06/24 16:07	09/10/24 23:04	1
13C4 PFHpA	105		50 - 200	09/06/24 16:07	09/10/24 23:04	1
13C8 PFOA	107		50 - 200	09/06/24 16:07	09/10/24 23:04	1
13C9 PFNA	108		50 - 200	09/06/24 16:07	09/10/24 23:04	1
13C6 PFDA	108		50 - 200	09/06/24 16:07	09/10/24 23:04	1
13C7 PFUnA	108		50 - 200	09/06/24 16:07	09/10/24 23:04	1
13C2 PFDoA	103		50 - 200	09/06/24 16:07	09/10/24 23:04	1
13C8 PFOS	112		50 - 200	09/06/24 16:07	09/10/24 23:04	1
M2-4:2 FTS	114		50 - 200	09/06/24 16:07	09/10/24 23:04	1
M2-6:2 FTS	112		50 - 200	09/06/24 16:07	09/10/24 23:04	1
M2-8:2 FTS	118		50 - 200	09/06/24 16:07	09/10/24 23:04	1
13C3 PFHxS	114		50 - 200	09/06/24 16:07	09/10/24 23:04	1

**Lab Sample ID: LCS 410-548739/2-A**

**Matrix: Drinking Water**

**Analysis Batch: 549952**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 548739**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	80.0	70.4		ng/L		88	70 - 130
Perfluoropentanoic acid (PFPeA)	80.0	74.3		ng/L		93	70 - 130
Perfluorohexanoic acid (PFHxA)	80.0	73.3		ng/L		92	70 - 130
Perfluoroheptanoic acid (PFHpA)	80.0	71.5		ng/L		89	70 - 130
Perfluorooctanoic acid (PFOA)	80.0	75.2		ng/L		94	70 - 130
Perfluorononanoic acid (PFNA)	80.0	70.2	M	ng/L		88	70 - 130
Perfluorodecanoic acid (PFDA)	80.0	69.4	M	ng/L		87	70 - 130
Perfluoroundecanoic acid (PFUnA)	80.0	73.1		ng/L		91	70 - 130
Perfluorododecanoic acid (PFDoA)	80.0	73.1		ng/L		91	70 - 130
Perfluorobutanesulfonic acid (PFBS)	70.8	67.2		ng/L		95	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	73.0	62.7	M	ng/L		86	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	76.2	68.4		ng/L		90	70 - 130
Perfluorooctanesulfonic acid (PFOS)	74.0	63.2	M	ng/L		85	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	75.0	65.9		ng/L		88	70 - 130

# QC Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Method: EPA 533 - EPA 533 Nov 2019 (Continued)

**Lab Sample ID: LCS 410-548739/2-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 549952**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 548739**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	74.4	66.7		ng/L		90	70 - 130
Hexafluoropropylene oxide dimer acid (HFPO DA)	80.0	70.8		ng/L		88	70 - 130
11Cl-PF3OUdS	74.4	64.9		ng/L		87	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	75.6	66.2		ng/L		88	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	74.7	67.1		ng/L		90	70 - 130
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	75.8	68.9		ng/L		91	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.6	65.4		ng/L		85	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	80.0	72.5		ng/L		91	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	80.0	66.1		ng/L		83	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	80.0	70.1		ng/L		88	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	71.2	64.6		ng/L		91	70 - 130

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	96		50 - 200
13C4 PFBA	105		50 - 200
13C3 PFBS	107		50 - 200
13C5 PFPeA	98		50 - 200
13C5 PFHxA	98		50 - 200
13C4 PFHpA	103		50 - 200
13C8 PFOA	99		50 - 200
13C9 PFNA	101	M	50 - 200
13C6 PFDA	103		50 - 200
13C7 PFUnA	98		50 - 200
13C2 PFDoA	95		50 - 200
13C8 PFOS	110		50 - 200
M2-4:2 FTS	111		50 - 200
M2-6:2 FTS	113		50 - 200
M2-8:2 FTS	110		50 - 200
13C3 PFHxS	111		50 - 200

**Lab Sample ID: LCSD 410-548739/3-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 549952**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 548739**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	
								RPD	Limit
Perfluorobutanoic acid (PFBA)	80.0	68.8		ng/L		86	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)	80.0	68.5		ng/L		86	70 - 130	8	30
Perfluorohexanoic acid (PFHxA)	80.0	75.0		ng/L		94	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	80.0	72.5		ng/L		91	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	80.0	74.4		ng/L		93	70 - 130	1	30
Perfluorononanoic acid (PFNA)	80.0	73.1		ng/L		91	70 - 130	4	30

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# QC Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Method: EPA 533 - EPA 533 Nov 2019 (Continued)

**Lab Sample ID: LCSD 410-548739/3-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 549952**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 548739**

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD	RPD
	Added	Result	Qualifier				Limits		Limit
Perfluorodecanoic acid (PFDA)	80.0	66.3		ng/L		83	70 - 130	5	30
Perfluoroundecanoic acid (PFUnA)	80.0	71.6		ng/L		90	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)	80.0	76.6		ng/L		96	70 - 130	5	30
Perfluorobutanesulfonic acid (PFBS)	70.8	65.6		ng/L		93	70 - 130	2	30
Perfluorohexanesulfonic acid (PFHxS)	73.0	65.2	M	ng/L		89	70 - 130	4	30
Perfluoroheptanesulfonic acid (PFHpS)	76.2	74.9		ng/L		98	70 - 130	9	30
Perfluorooctanesulfonic acid (PFOS)	74.0	68.2	M	ng/L		92	70 - 130	8	30
Perfluoropentanesulfonic acid (PFPeS)	75.0	66.4		ng/L		89	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	74.4	67.4		ng/L		91	70 - 130	1	30
Hexafluoropropylene oxide dimer acid (HFPO DA)	80.0	75.1		ng/L		94	70 - 130	6	30
11Cl-PF3OUdS	74.4	66.6		ng/L		90	70 - 130	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	75.6	65.3		ng/L		86	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	74.7	70.7		ng/L		95	70 - 130	5	30
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	75.8	72.5		ng/L		96	70 - 130	5	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.6	67.2		ng/L		88	70 - 130	3	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	80.0	72.5		ng/L		91	70 - 130	0	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	80.0	69.7		ng/L		87	70 - 130	5	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	80.0	75.8		ng/L		95	70 - 130	8	30
Perfluoro (2-ethoxyethane) sulfonic acid (PEESA)	71.2	64.2		ng/L		90	70 - 130	1	30

Isotope Dilution	LCSD LCSD		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	100		50 - 200
13C4 PFBA	103		50 - 200
13C3 PFBS	104		50 - 200
13C5 PFPeA	100		50 - 200
13C5 PFHxA	105		50 - 200
13C4 PFHpA	110		50 - 200
13C8 PFOA	107		50 - 200
13C9 PFNA	108		50 - 200
13C6 PFDA	111		50 - 200
13C7 PFUnA	106		50 - 200
13C2 PFDoA	100		50 - 200
13C8 PFOS	103		50 - 200
M2-4:2 FTS	99		50 - 200
M2-6:2 FTS	107		50 - 200

# QC Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Method: EPA 533 - EPA 533 Nov 2019 (Continued)

**Lab Sample ID: LCSD 410-548739/3-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 549952**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 548739**

Isotope Dilution	LCSD LCSD		Limits
	%Recovery	Qualifier	
M2-8:2 FTS	107		50 - 200
13C3 PFHxS	107		50 - 200

**Lab Sample ID: MB 410-549787/1-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 549278**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 549787**

Analyte	MB MB		LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorobutanoic acid (PFBA)	<2.0		3.0	1.0	ng/L		09/06/24 10:46	09/09/24 19:57	1
Perfluoropentanoic acid (PFPeA)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
Perfluorohexanoic acid (PFHxA)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
Perfluoroheptanoic acid (PFHpA)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
Perfluorooctanoic acid (PFOA)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
Perfluorononanoic acid (PFNA)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
Perfluorodecanoic acid (PFDA)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
Perfluoroundecanoic acid (PFUnA)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
Perfluorododecanoic acid (PFDoA)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
Perfluorobutanesulfonic acid (PFBS)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
Perfluorohexanesulfonic acid (PFHxS)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
Perfluorooctanesulfonic acid (PFOS)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
Perfluoropentanesulfonic acid (PFPeS)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
11Cl-PF3OUdS	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<2.0		3.0	1.0	ng/L		09/06/24 10:46	09/09/24 19:57	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.5		2.0	0.50	ng/L		09/06/24 10:46	09/09/24 19:57	1

  

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C3 HFPO-DA	111		50 - 200	09/06/24 10:46	09/09/24 19:57	1
13C4 PFBA	108		50 - 200	09/06/24 10:46	09/09/24 19:57	1
13C3 PFBS	112		50 - 200	09/06/24 10:46	09/09/24 19:57	1
13C5 PFPeA	100		50 - 200	09/06/24 10:46	09/09/24 19:57	1
13C5 PFHxA	106	M	50 - 200	09/06/24 10:46	09/09/24 19:57	1

## QC Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

### Method: EPA 533 - EPA 533 Nov 2019 (Continued)

**Lab Sample ID: MB 410-549787/1-A**

**Matrix: Drinking Water**

**Analysis Batch: 549278**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 549787**

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C4 PFHpA	106		50 - 200	09/06/24 10:46	09/09/24 19:57	1
13C8 PFOA	108		50 - 200	09/06/24 10:46	09/09/24 19:57	1
13C9 PFNA	105		50 - 200	09/06/24 10:46	09/09/24 19:57	1
13C6 PFDA	105		50 - 200	09/06/24 10:46	09/09/24 19:57	1
13C7 PFUnA	109		50 - 200	09/06/24 10:46	09/09/24 19:57	1
13C2 PFDoA	109		50 - 200	09/06/24 10:46	09/09/24 19:57	1
13C8 PFOS	100		50 - 200	09/06/24 10:46	09/09/24 19:57	1
M2-4:2 FTS	85		50 - 200	09/06/24 10:46	09/09/24 19:57	1
M2-6:2 FTS	91		50 - 200	09/06/24 10:46	09/09/24 19:57	1
M2-8:2 FTS	104		50 - 200	09/06/24 10:46	09/09/24 19:57	1
13C3 PFHxS	108		50 - 200	09/06/24 10:46	09/09/24 19:57	1

**Lab Sample ID: LCS 410-549787/2-A**

**Matrix: Drinking Water**

**Analysis Batch: 549278**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 549787**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanoic acid (PFPeA)	80.0	78.5		ng/L		98	70 - 130
Perfluorohexanoic acid (PFHxA)	80.0	75.0	M	ng/L		94	70 - 130
Perfluoroheptanoic acid (PFHpA)	80.0	76.4		ng/L		95	70 - 130
Perfluorooctanoic acid (PFOA)	80.0	74.8		ng/L		94	70 - 130
Perfluorononanoic acid (PFNA)	80.0	75.6		ng/L		95	70 - 130
Perfluorodecanoic acid (PFDA)	80.0	72.2		ng/L		90	70 - 130
Perfluoroundecanoic acid (PFUnA)	80.0	81.6		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	80.0	73.4		ng/L		92	70 - 130
Perfluorobutanesulfonic acid (PFBS)	70.8	63.3		ng/L		89	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	73.0	67.9	M	ng/L		93	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	76.2	73.9		ng/L		97	70 - 130
Perfluorooctanesulfonic acid (PFOS)	74.0	68.8	M	ng/L		93	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	75.0	73.0		ng/L		97	70 - 130
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	74.4	67.2		ng/L		90	70 - 130
Hexafluoropropylene oxide dimer acid (HFPO DA)	80.0	75.9		ng/L		95	70 - 130
11Cl-PF3OUdS	74.4	65.8		ng/L		88	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	75.6	77.6		ng/L		103	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	74.7	69.0		ng/L		92	70 - 130
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	75.8	75.2		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	76.6	71.4		ng/L		93	70 - 130

# QC Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Method: EPA 533 - EPA 533 Nov 2019 (Continued)

**Lab Sample ID: LCS 410-549787/2-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 549278**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 549787**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nonafluoro-3,6-dioxiheptanoic acid (NFDHA)	80.0	82.8		ng/L		104	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	80.0	79.1		ng/L		99	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	80.0	79.4		ng/L		99	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEISA)	71.2	65.6		ng/L		92	70 - 130

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	109		50 - 200
13C4 PFBA	104		50 - 200
13C3 PFBS	106		50 - 200
13C5 PFPeA	97		50 - 200
13C5 PFHxA	104		50 - 200
13C4 PFHpA	101		50 - 200
13C8 PFOA	107		50 - 200
13C9 PFNA	108		50 - 200
13C6 PFDA	105		50 - 200
13C7 PFUnA	100		50 - 200
13C2 PFDoA	104		50 - 200
13C8 PFOS	105		50 - 200
M2-4:2 FTS	85		50 - 200
M2-6:2 FTS	87		50 - 200
M2-8:2 FTS	101		50 - 200
13C3 PFHxS	110		50 - 200

**Lab Sample ID: MB 410-551313/1-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 552251**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 551313**

Analyte	MB MB		LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorobutanoic acid (PFBA)	<2.0		3.0	1.0	ng/L		09/13/24 16:09	09/17/24 16:52	1
Perfluoropentanoic acid (PFPeA)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
Perfluorohexanoic acid (PFHxA)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
Perfluoroheptanoic acid (PFHpA)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
Perfluorooctanoic acid (PFOA)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
Perfluorononanoic acid (PFNA)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
Perfluorodecanoic acid (PFDA)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
Perfluoroundecanoic acid (PFUnA)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
Perfluorododecanoic acid (PFDoA)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
Perfluorobutanesulfonic acid (PFBS)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
Perfluorohexanesulfonic acid (PFHxS)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
Perfluorooctanesulfonic acid (PFOS)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
Perfluoropentanesulfonic acid (PFPeS)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid (9Cl-PF3ONS)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1

# QC Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Method: EPA 533 - EPA 533 Nov 2019 (Continued)

**Lab Sample ID: MB 410-551313/1-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 552251**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 551313**

Analyte	MB	MB	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Hexafluoropropylene oxide dimer acid (HFPO DA)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
11Cl-PF3OUdS	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	<2.0		3.0	1.0	ng/L		09/13/24 16:09	09/17/24 16:52	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.5		2.0	0.50	ng/L		09/13/24 16:09	09/17/24 16:52	1

Isotope Dilution	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C3 HFPO-DA	96		50 - 200	09/13/24 16:09	09/17/24 16:52	1
13C4 PFBA	94		50 - 200	09/13/24 16:09	09/17/24 16:52	1
13C3 PFBS	102		50 - 200	09/13/24 16:09	09/17/24 16:52	1
13C5 PFPeA	81		50 - 200	09/13/24 16:09	09/17/24 16:52	1
13C5 PFHxA	95	M	50 - 200	09/13/24 16:09	09/17/24 16:52	1
13C4 PFHpA	96		50 - 200	09/13/24 16:09	09/17/24 16:52	1
13C8 PFOA	97		50 - 200	09/13/24 16:09	09/17/24 16:52	1
13C9 PFNA	100	M	50 - 200	09/13/24 16:09	09/17/24 16:52	1
13C6 PFDA	88		50 - 200	09/13/24 16:09	09/17/24 16:52	1
13C7 PFUnA	92		50 - 200	09/13/24 16:09	09/17/24 16:52	1
13C2 PFDoA	86		50 - 200	09/13/24 16:09	09/17/24 16:52	1
13C8 PFOS	101		50 - 200	09/13/24 16:09	09/17/24 16:52	1
M2-4:2 FTS	94		50 - 200	09/13/24 16:09	09/17/24 16:52	1
M2-6:2 FTS	94		50 - 200	09/13/24 16:09	09/17/24 16:52	1
M2-8:2 FTS	89		50 - 200	09/13/24 16:09	09/17/24 16:52	1
13C3 PFHxS	108		50 - 200	09/13/24 16:09	09/17/24 16:52	1

**Lab Sample ID: LCS 410-551313/2-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 552251**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 551313**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Perfluorobutanoic acid (PFBA)	10.0	9.57	M	ng/L		96	70 - 130
Perfluoropentanoic acid (PFPeA)	10.0	10.0		ng/L		100	70 - 130
Perfluorohexanoic acid (PFHxA)	10.0	9.02		ng/L		90	70 - 130
Perfluoroheptanoic acid (PFHpA)	10.0	9.33		ng/L		93	70 - 130
Perfluorooctanoic acid (PFOA)	10.0	10.2		ng/L		102	70 - 130
Perfluorononanoic acid (PFNA)	10.0	9.38		ng/L		94	70 - 130
Perfluorodecanoic acid (PFDA)	10.0	10.6		ng/L		106	70 - 130

# QC Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Method: EPA 533 - EPA 533 Nov 2019 (Continued)

Lab Sample ID: LCS 410-551313/2-A

Matrix: Drinking Water

Analysis Batch: 552251

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 551313

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	10.0	10.2		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	10.0	10.6		ng/L		106	70 - 130
Perfluorobutanesulfonic acid (PFBS)	8.85	7.74		ng/L		87	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	9.12	8.59	M	ng/L		94	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	9.52	9.07		ng/L		95	70 - 130
Perfluorooctanesulfonic acid (PFOS)	9.26	8.54	M	ng/L		92	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	9.38	8.75		ng/L		93	70 - 130
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	9.30	9.50		ng/L		102	70 - 130
Hexafluoropropylene oxide dimer acid (HFPO DA)	10.0	9.57		ng/L		96	70 - 130
11Cl-PF3OUdS	9.30	8.59		ng/L		92	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	9.45	8.61		ng/L		91	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	9.34	7.70		ng/L		82	70 - 130
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	9.48	9.09		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	9.58	9.18		ng/L		96	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	10.0	8.36		ng/L		84	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	10.0	8.90		ng/L		89	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	10.0	10.2		ng/L		102	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	8.90	8.16		ng/L		92	70 - 130

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	91		50 - 200
13C4 PFBA	95		50 - 200
13C3 PFBS	111		50 - 200
13C5 PFPeA	80		50 - 200
13C5 PFHxA	103	M	50 - 200
13C4 PFHpA	101		50 - 200
13C8 PFOA	97		50 - 200
13C9 PFNA	103		50 - 200
13C6 PFDA	92		50 - 200
13C7 PFUnA	88		50 - 200
13C2 PFDoA	93		50 - 200
13C8 PFOS	104		50 - 200
M2-4:2 FTS	102		50 - 200
M2-6:2 FTS	98		50 - 200
M2-8:2 FTS	101		50 - 200

# QC Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Method: EPA 533 - EPA 533 Nov 2019 (Continued)

**Lab Sample ID: LCS 410-551313/2-A**

**Matrix: Drinking Water**

**Analysis Batch: 552251**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 551313**

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C3 PFHxS	110		50 - 200

**Lab Sample ID: LCSD 410-551313/3-A**

**Matrix: Drinking Water**

**Analysis Batch: 552251**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 551313**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoropentanoic acid (PFPeA)	10.0	9.56		ng/L		96	70 - 130	5	30
Perfluorohexanoic acid (PFHxA)	10.0	9.97		ng/L		100	70 - 130	10	30
Perfluoroheptanoic acid (PFHpA)	10.0	9.43		ng/L		94	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	10.0	10.7		ng/L		107	70 - 130	4	30
Perfluorononanoic acid (PFNA)	10.0	10.2		ng/L		102	70 - 130	8	30
Perfluorodecanoic acid (PFDA)	10.0	9.76		ng/L		98	70 - 130	8	30
Perfluoroundecanoic acid (PFUnA)	10.0	10.2		ng/L		102	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)	10.0	11.8		ng/L		118	70 - 130	11	30
Perfluorobutanesulfonic acid (PFBS)	8.85	9.01		ng/L		102	70 - 130	15	30
Perfluorohexanesulfonic acid (PFHxS)	9.12	8.63	M	ng/L		95	70 - 130	1	30
Perfluoroheptanesulfonic acid (PFHpS)	9.52	9.75		ng/L		102	70 - 130	7	30
Perfluorooctanesulfonic acid (PFOS)	9.26	9.24	M	ng/L		100	70 - 130	8	30
Perfluoropentanesulfonic acid (PFPeS)	9.38	8.85		ng/L		94	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	9.30	10.3		ng/L		110	70 - 130	8	30
Hexafluoropropylene oxide dimer acid (HFPO DA)	10.0	9.46		ng/L		95	70 - 130	1	30
11Cl-PF3OUdS	9.30	9.01		ng/L		97	70 - 130	5	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	9.45	8.95		ng/L		95	70 - 130	4	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	9.34	8.78		ng/L		94	70 - 130	13	30
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	9.48	9.29		ng/L		98	70 - 130	2	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	9.58	9.58		ng/L		100	70 - 130	4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	10.0	9.42		ng/L		94	70 - 130	12	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	10.0	8.95		ng/L		90	70 - 130	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	10.0	11.1		ng/L		111	70 - 130	9	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	8.90	8.44		ng/L		95	70 - 130	3	30

Isotope Dilution	LCSD LCSD		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	91		50 - 200

# QC Sample Results

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Method: EPA 533 - EPA 533 Nov 2019 (Continued)

**Lab Sample ID: LCSD 410-551313/3-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 552251**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 551313**

<i>Isotope Dilution</i>	<i>LCSD LCSD</i>		<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
13C4 PFBA	97		50 - 200
13C3 PFBS	111		50 - 200
13C5 PFPeA	81		50 - 200
13C5 PFHxA	96		50 - 200
13C4 PFHpA	97		50 - 200
13C8 PFOA	93		50 - 200
13C9 PFNA	94		50 - 200
13C6 PFDA	95		50 - 200
13C7 PFUnA	89		50 - 200
13C2 PFDoA	81		50 - 200
13C8 PFOS	101		50 - 200
M2-4:2 FTS	94		50 - 200
M2-6:2 FTS	102		50 - 200
M2-8:2 FTS	100		50 - 200
13C3 PFHxS	113		50 - 200

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# QC Association Summary

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

## LCMS

### Prep Batch: 548577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-186028-15 - DL	Hastings-01	Total/NA	Drinking Water	EPA 533	
410-186028-15	Hastings-01	Total/NA	Drinking Water	EPA 533	
410-186028-16	Red Wing-01	Total/NA	Drinking Water	EPA 533	
410-186028-17	Winona-01	Total/NA	Drinking Water	EPA 533	
410-186028-18	Owatonna-01	Total/NA	Drinking Water	EPA 533	
410-186028-19	FD-03	Total/NA	Drinking Water	EPA 533	
410-186028-20	FD-02	Total/NA	Drinking Water	EPA 533	
MB 410-548577/1-A	Method Blank	Total/NA	Drinking Water	EPA 533	
LCS 410-548577/2-A	Lab Control Sample	Total/NA	Drinking Water	EPA 533	

### Prep Batch: 548739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-186028-21	Sauk Center-01	Total/NA	Drinking Water	EPA 533	
410-186028-22	FB-03	Total/NA	Drinking Water	EPA 533	
410-186028-23	Alexandria-01	Total/NA	Drinking Water	EPA 533	
410-186028-24	Fergus Falls-01	Total/NA	Drinking Water	EPA 533	
410-186028-25	Cambridge-01	Total/NA	Drinking Water	EPA 533	
410-186028-26	FB-04	Total/NA	Drinking Water	EPA 533	
410-186028-27	Hibbring-01	Total/NA	Drinking Water	EPA 533	
410-186028-28	Chisholm-01	Total/NA	Drinking Water	EPA 533	
410-186028-29	Brainerd-01	Total/NA	Drinking Water	EPA 533	
410-186028-30	Monticello-01	Total/NA	Drinking Water	EPA 533	
410-186028-31	FB-05	Total/NA	Drinking Water	EPA 533	
410-186028-32	Pine City	Total/NA	Drinking Water	EPA 533	
MB 410-548739/1-A	Method Blank	Total/NA	Drinking Water	EPA 533	
LCS 410-548739/2-A	Lab Control Sample	Total/NA	Drinking Water	EPA 533	
LCSD 410-548739/3-A	Lab Control Sample Dup	Total/NA	Drinking Water	EPA 533	

### Analysis Batch: 549278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-186028-1	Olivia 01	Total/NA	Drinking Water	EPA 533	549787
410-186028-2	FB-01	Total/NA	Drinking Water	EPA 533	549787
410-186028-15	Hastings-01	Total/NA	Drinking Water	EPA 533	548577
410-186028-16	Red Wing-01	Total/NA	Drinking Water	EPA 533	548577
410-186028-17	Winona-01	Total/NA	Drinking Water	EPA 533	548577
410-186028-18	Owatonna-01	Total/NA	Drinking Water	EPA 533	548577
410-186028-19	FD-03	Total/NA	Drinking Water	EPA 533	548577
410-186028-20	FD-02	Total/NA	Drinking Water	EPA 533	548577
MB 410-548577/1-A	Method Blank	Total/NA	Drinking Water	EPA 533	548577
MB 410-549787/1-A	Method Blank	Total/NA	Drinking Water	EPA 533	549787
LCS 410-548577/2-A	Lab Control Sample	Total/NA	Drinking Water	EPA 533	548577
LCS 410-549787/2-A	Lab Control Sample	Total/NA	Drinking Water	EPA 533	549787

### Prep Batch: 549787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-186028-1	Olivia 01	Total/NA	Drinking Water	EPA 533	
410-186028-2	FB-01	Total/NA	Drinking Water	EPA 533	
MB 410-549787/1-A	Method Blank	Total/NA	Drinking Water	EPA 533	
LCS 410-549787/2-A	Lab Control Sample	Total/NA	Drinking Water	EPA 533	

# QC Association Summary

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

## LCMS

### Analysis Batch: 549952

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-186028-15 - DL	Hastings-01	Total/NA	Drinking Water	EPA 533	548577
410-186028-21	Sauk Center-01	Total/NA	Drinking Water	EPA 533	548739
410-186028-22	FB-03	Total/NA	Drinking Water	EPA 533	548739
410-186028-23	Alexandria-01	Total/NA	Drinking Water	EPA 533	548739
410-186028-24	Fergus Falls-01	Total/NA	Drinking Water	EPA 533	548739
410-186028-25	Cambridge-01	Total/NA	Drinking Water	EPA 533	548739
410-186028-26	FB-04	Total/NA	Drinking Water	EPA 533	548739
410-186028-27	Hibbring-01	Total/NA	Drinking Water	EPA 533	548739
410-186028-28	Chisholm-01	Total/NA	Drinking Water	EPA 533	548739
410-186028-29	Brainerd-01	Total/NA	Drinking Water	EPA 533	548739
410-186028-30	Monticello-01	Total/NA	Drinking Water	EPA 533	548739
410-186028-31	FB-05	Total/NA	Drinking Water	EPA 533	548739
410-186028-32	Pine City	Total/NA	Drinking Water	EPA 533	548739
MB 410-548739/1-A	Method Blank	Total/NA	Drinking Water	EPA 533	548739
LCS 410-548739/2-A	Lab Control Sample	Total/NA	Drinking Water	EPA 533	548739
LCSD 410-548739/3-A	Lab Control Sample Dup	Total/NA	Drinking Water	EPA 533	548739

### Prep Batch: 551313

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-186028-3	Appleton-01	Total/NA	Drinking Water	EPA 533	
410-186028-4	Ortenville-01	Total/NA	Drinking Water	EPA 533	
410-186028-5	FD-01	Total/NA	Drinking Water	EPA 533	
410-186028-6	Marshall-01	Total/NA	Drinking Water	EPA 533	
410-186028-7	FB-02	Total/NA	Drinking Water	EPA 533	
410-186028-8	Pipestone-01	Total/NA	Drinking Water	EPA 533	
410-186028-9	Luverne-01	Total/NA	Drinking Water	EPA 533	
410-186028-10	Jackson-01	Total/NA	Drinking Water	EPA 533	
410-186028-11	St James-01	Total/NA	Drinking Water	EPA 533	
410-186028-12	Chanhassen-01	Total/NA	Drinking Water	EPA 533	
410-186028-13	Lakeville-01	Total/NA	Drinking Water	EPA 533	
410-186028-14	Cottage Grove-01	Total/NA	Drinking Water	EPA 533	
MB 410-551313/1-A	Method Blank	Total/NA	Drinking Water	EPA 533	
LCS 410-551313/2-A	Lab Control Sample	Total/NA	Drinking Water	EPA 533	
LCSD 410-551313/3-A	Lab Control Sample Dup	Total/NA	Drinking Water	EPA 533	

### Analysis Batch: 552251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-186028-3	Appleton-01	Total/NA	Drinking Water	EPA 533	551313
410-186028-4	Ortenville-01	Total/NA	Drinking Water	EPA 533	551313
410-186028-5	FD-01	Total/NA	Drinking Water	EPA 533	551313
410-186028-6	Marshall-01	Total/NA	Drinking Water	EPA 533	551313
410-186028-7	FB-02	Total/NA	Drinking Water	EPA 533	551313
410-186028-8	Pipestone-01	Total/NA	Drinking Water	EPA 533	551313
410-186028-9	Luverne-01	Total/NA	Drinking Water	EPA 533	551313
410-186028-10	Jackson-01	Total/NA	Drinking Water	EPA 533	551313
410-186028-11	St James-01	Total/NA	Drinking Water	EPA 533	551313
410-186028-12	Chanhassen-01	Total/NA	Drinking Water	EPA 533	551313
410-186028-13	Lakeville-01	Total/NA	Drinking Water	EPA 533	551313
410-186028-14	Cottage Grove-01	Total/NA	Drinking Water	EPA 533	551313
MB 410-551313/1-A	Method Blank	Total/NA	Drinking Water	EPA 533	551313
LCS 410-551313/2-A	Lab Control Sample	Total/NA	Drinking Water	EPA 533	551313

# QC Association Summary

Client: MN Dept of Military Affairs Facilities Management Office  
Project/Site: 533 in drinking water

Job ID: 410-186028-1

## LCMS (Continued)

### Analysis Batch: 552251 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 410-551313/3-A	Lab Control Sample Dup	Total/NA	Drinking Water	EPA 533	551313

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

# Lab Chronicle

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Olivia 01**

**Lab Sample ID: 410-186028-1**

Date Collected: 08/21/24 09:08

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			549787	HQ8B	ELLE	09/06/24 10:46
Total/NA	Analysis	EPA 533		1	549278	WR4P	ELLE	09/09/24 21:18

**Client Sample ID: FB-01**

**Lab Sample ID: 410-186028-2**

Date Collected: 08/21/24 09:11

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			549787	HQ8B	ELLE	09/06/24 10:46
Total/NA	Analysis	EPA 533		1	549278	WR4P	ELLE	09/09/24 21:31

**Client Sample ID: Appleton-01**

**Lab Sample ID: 410-186028-3**

Date Collected: 08/21/24 11:47

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			551313	XBL5	ELLE	09/13/24 16:09
Total/NA	Analysis	EPA 533		1	552251	WR4P	ELLE	09/17/24 17:46

**Client Sample ID: Ortenville-01**

**Lab Sample ID: 410-186028-4**

Date Collected: 08/21/24 13:15

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			551313	XBL5	ELLE	09/13/24 16:09
Total/NA	Analysis	EPA 533		1	552251	WR4P	ELLE	09/17/24 17:59

**Client Sample ID: FD-01**

**Lab Sample ID: 410-186028-5**

Date Collected: 08/21/24 00:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			551313	XBL5	ELLE	09/13/24 16:09
Total/NA	Analysis	EPA 533		1	552251	WR4P	ELLE	09/17/24 18:13

**Client Sample ID: Marshall-01**

**Lab Sample ID: 410-186028-6**

Date Collected: 08/22/24 08:25

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			551313	XBL5	ELLE	09/13/24 16:09
Total/NA	Analysis	EPA 533		1	552251	WR4P	ELLE	09/17/24 18:26

# Lab Chronicle

Client: MN Dept of Military Affairs Facilities Management Office  
Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Client Sample ID: FB-02

Date Collected: 08/22/24 08:30

Date Received: 08/28/24 09:50

## Lab Sample ID: 410-186028-7

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			551313	XBL5	ELLE	09/13/24 16:09
Total/NA	Analysis	EPA 533		1	552251	WR4P	ELLE	09/17/24 18:40

## Client Sample ID: Pipestone-01

Date Collected: 08/22/24 09:52

Date Received: 08/28/24 09:50

## Lab Sample ID: 410-186028-8

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			551313	XBL5	ELLE	09/13/24 16:09
Total/NA	Analysis	EPA 533		1	552251	WR4P	ELLE	09/17/24 18:53

## Client Sample ID: Luverne-01

Date Collected: 08/22/24 11:35

Date Received: 08/28/24 09:50

## Lab Sample ID: 410-186028-9

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			551313	XBL5	ELLE	09/13/24 16:09
Total/NA	Analysis	EPA 533		1	552251	WR4P	ELLE	09/17/24 19:07

## Client Sample ID: Jackson-01

Date Collected: 08/22/24 13:08

Date Received: 08/28/24 09:50

## Lab Sample ID: 410-186028-10

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			551313	XBL5	ELLE	09/13/24 16:09
Total/NA	Analysis	EPA 533		1	552251	WR4P	ELLE	09/17/24 19:20

## Client Sample ID: St James-01

Date Collected: 08/22/24 14:10

Date Received: 08/28/24 09:50

## Lab Sample ID: 410-186028-11

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			551313	XBL5	ELLE	09/13/24 16:09
Total/NA	Analysis	EPA 533		1	552251	WR4P	ELLE	09/17/24 19:47

## Client Sample ID: Chanassen-01

Date Collected: 08/22/24 10:50

Date Received: 08/28/24 09:50

## Lab Sample ID: 410-186028-12

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			551313	XBL5	ELLE	09/13/24 16:09
Total/NA	Analysis	EPA 533		1	552251	WR4P	ELLE	09/17/24 20:01

# Lab Chronicle

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: Lakeville-01**

**Lab Sample ID: 410-186028-13**

Date Collected: 08/22/24 11:20

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			551313	XBL5	ELLE	09/13/24 16:09
Total/NA	Analysis	EPA 533		1	552251	WR4P	ELLE	09/17/24 20:28

**Client Sample ID: Cottage Grove-01**

**Lab Sample ID: 410-186028-14**

Date Collected: 08/22/24 12:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			551313	XBL5	ELLE	09/13/24 16:09
Total/NA	Analysis	EPA 533		1	552251	WR4P	ELLE	09/17/24 20:41

**Client Sample ID: Hastings-01**

**Lab Sample ID: 410-186028-15**

Date Collected: 08/22/24 13:52

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			548577	HQ8B	ELLE	09/06/24 09:44
Total/NA	Analysis	EPA 533		1	549278	WR4P	ELLE	09/10/24 05:37
Total/NA	Prep	EPA 533	DL		548577	HQ8B	ELLE	09/06/24 09:44
Total/NA	Analysis	EPA 533	DL	10	549952	WR4P	ELLE	09/10/24 22:37

**Client Sample ID: Red Wing-01**

**Lab Sample ID: 410-186028-16**

Date Collected: 08/22/24 14:32

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			548577	HQ8B	ELLE	09/06/24 09:44
Total/NA	Analysis	EPA 533		1	549278	WR4P	ELLE	09/10/24 05:50

**Client Sample ID: Winona-01**

**Lab Sample ID: 410-186028-17**

Date Collected: 08/22/24 16:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			548577	HQ8B	ELLE	09/06/24 09:44
Total/NA	Analysis	EPA 533		1	549278	WR4P	ELLE	09/10/24 06:04

**Client Sample ID: Owatonna-01**

**Lab Sample ID: 410-186028-18**

Date Collected: 08/22/24 18:05

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			548577	HQ8B	ELLE	09/06/24 09:44
Total/NA	Analysis	EPA 533		1	549278	WR4P	ELLE	09/10/24 06:17

# Lab Chronicle

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: FD-03**

**Lab Sample ID: 410-186028-19**

Date Collected: 08/22/24 00:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			548577	HQ8B	ELLE	09/06/24 09:44
Total/NA	Analysis	EPA 533		1	549278	WR4P	ELLE	09/10/24 06:31

**Client Sample ID: FD-02**

**Lab Sample ID: 410-186028-20**

Date Collected: 08/21/24 00:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			548577	HQ8B	ELLE	09/06/24 09:44
Total/NA	Analysis	EPA 533		1	549278	WR4P	ELLE	09/10/24 06:44

**Client Sample ID: Sauk Center-01**

**Lab Sample ID: 410-186028-21**

Date Collected: 08/20/24 10:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			548739	HQ8B	ELLE	09/06/24 16:07
Total/NA	Analysis	EPA 533		1	549952	WR4P	ELLE	09/10/24 23:58

**Client Sample ID: FB-03**

**Lab Sample ID: 410-186028-22**

Date Collected: 08/20/24 10:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			548739	HQ8B	ELLE	09/06/24 16:07
Total/NA	Analysis	EPA 533		1	549952	WR4P	ELLE	09/11/24 00:11

**Client Sample ID: Alexandria-01**

**Lab Sample ID: 410-186028-23**

Date Collected: 08/20/24 11:00

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			548739	HQ8B	ELLE	09/06/24 16:07
Total/NA	Analysis	EPA 533		1	549952	WR4P	ELLE	09/11/24 00:25

**Client Sample ID: Fergus Falls-01**

**Lab Sample ID: 410-186028-24**

Date Collected: 08/20/24 12:05

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			548739	HQ8B	ELLE	09/06/24 16:07
Total/NA	Analysis	EPA 533		1	549952	WR4P	ELLE	09/11/24 00:52

# Lab Chronicle

Client: MN Dept of Military Affairs Facilities Management Office  
Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Client Sample ID: Cambridge-01

Lab Sample ID: 410-186028-25

Date Collected: 08/21/24 09:10

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			548739	HQ8B	ELLE	09/06/24 16:07
Total/NA	Analysis	EPA 533		1	549952	WR4P	ELLE	09/11/24 01:05

## Client Sample ID: FB-04

Lab Sample ID: 410-186028-26

Date Collected: 08/21/24 09:10

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			548739	HQ8B	ELLE	09/06/24 16:07
Total/NA	Analysis	EPA 533		1	549952	WR4P	ELLE	09/11/24 01:18

## Client Sample ID: Hibbring-01

Lab Sample ID: 410-186028-27

Date Collected: 08/21/24 14:20

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			548739	HQ8B	ELLE	09/06/24 16:07
Total/NA	Analysis	EPA 533		1	549952	WR4P	ELLE	09/11/24 01:32

## Client Sample ID: Chisholm-01

Lab Sample ID: 410-186028-28

Date Collected: 08/21/24 14:50

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			548739	HQ8B	ELLE	09/06/24 16:07
Total/NA	Analysis	EPA 533		1	549952	WR4P	ELLE	09/11/24 01:45

## Client Sample ID: Brainerd-01

Lab Sample ID: 410-186028-29

Date Collected: 08/21/24 17:40

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			548739	HQ8B	ELLE	09/06/24 16:07
Total/NA	Analysis	EPA 533		1	549952	WR4P	ELLE	09/11/24 01:59

## Client Sample ID: Monticello-01

Lab Sample ID: 410-186028-30

Date Collected: 08/22/24 08:55

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			548739	HQ8B	ELLE	09/06/24 16:07
Total/NA	Analysis	EPA 533		1	549952	WR4P	ELLE	09/11/24 02:12



# Lab Chronicle

Client: MN Dept of Military Affairs Facilities Management Office  
 Project/Site: 533 in drinking water

Job ID: 410-186028-1

**Client Sample ID: FB-05**

**Lab Sample ID: 410-186028-31**

Date Collected: 08/22/24 08:55

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			548739	HQ8B	ELLE	09/06/24 16:07
Total/NA	Analysis	EPA 533		1	549952	WR4P	ELLE	09/11/24 02:39

**Client Sample ID: Pine City**

**Lab Sample ID: 410-186028-32**

Date Collected: 08/21/24 10:15

Matrix: Drinking Water

Date Received: 08/28/24 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA 533			548739	HQ8B	ELLE	09/06/24 16:07
Total/NA	Analysis	EPA 533		1	549952	WR4P	ELLE	09/11/24 02:53

**Laboratory References:**

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



# Accreditation/Certification Summary

Client: MN Dept of Military Affairs Facilities Management Office  
Project/Site: 533 in drinking water

Job ID: 410-186028-1

## Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24
Minnesota	NELAP	042-999-487	12-31-24

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# Method Summary

Client: MN Dept of Military Affairs Facilities Management Office  
Project/Site: 533 in drinking water

Job ID: 410-186028-1

Method	Method Description	Protocol	Laboratory
EPA 533	EPA 533 Nov 2019	EPA	ELLE
EPA 533	EPA 533 Nov 2019	EPA	ELLE

**Protocol References:**

EPA = US Environmental Protection Agency

**Laboratory References:**

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



# Sample Summary

Client: MN Dept of Military Affairs Facilities Management Office  
Project/Site: 533 in drinking water

Job ID: 410-186028-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-186028-1	Olivia 01	Drinking Water	08/21/24 09:08	08/28/24 09:50
410-186028-2	FB-01	Drinking Water	08/21/24 09:11	08/28/24 09:50
410-186028-3	Appleton-01	Drinking Water	08/21/24 11:47	08/28/24 09:50
410-186028-4	Ortenville-01	Drinking Water	08/21/24 13:15	08/28/24 09:50
410-186028-5	FD-01	Drinking Water	08/21/24 00:00	08/28/24 09:50
410-186028-6	Marshall-01	Drinking Water	08/22/24 08:25	08/28/24 09:50
410-186028-7	FB-02	Drinking Water	08/22/24 08:30	08/28/24 09:50
410-186028-8	Pipestone-01	Drinking Water	08/22/24 09:52	08/28/24 09:50
410-186028-9	Luverne-01	Drinking Water	08/22/24 11:35	08/28/24 09:50
410-186028-10	Jackson-01	Drinking Water	08/22/24 13:08	08/28/24 09:50
410-186028-11	St James-01	Drinking Water	08/22/24 14:10	08/28/24 09:50
410-186028-12	Chanhasen-01	Drinking Water	08/22/24 10:50	08/28/24 09:50
410-186028-13	Lakeville-01	Drinking Water	08/22/24 11:20	08/28/24 09:50
410-186028-14	Cottage Grove-01	Drinking Water	08/22/24 12:00	08/28/24 09:50
410-186028-15	Hastings-01	Drinking Water	08/22/24 13:52	08/28/24 09:50
410-186028-16	Red Wing-01	Drinking Water	08/22/24 14:32	08/28/24 09:50
410-186028-17	Winona-01	Drinking Water	08/22/24 16:00	08/28/24 09:50
410-186028-18	Owatonna-01	Drinking Water	08/22/24 18:05	08/28/24 09:50
410-186028-19	FD-03	Drinking Water	08/22/24 00:00	08/28/24 09:50
410-186028-20	FD-02	Drinking Water	08/21/24 00:00	08/28/24 09:50
410-186028-21	Sauk Center-01	Drinking Water	08/20/24 10:00	08/28/24 09:50
410-186028-22	FB-03	Drinking Water	08/20/24 10:00	08/28/24 09:50
410-186028-23	Alexandria-01	Drinking Water	08/20/24 11:00	08/28/24 09:50
410-186028-24	Fergus Falls-01	Drinking Water	08/20/24 12:05	08/28/24 09:50
410-186028-25	Cambridge-01	Drinking Water	08/21/24 09:10	08/28/24 09:50
410-186028-26	FB-04	Drinking Water	08/21/24 09:10	08/28/24 09:50
410-186028-27	Hibbring-01	Drinking Water	08/21/24 14:20	08/28/24 09:50
410-186028-28	Chisholm-01	Drinking Water	08/21/24 14:50	08/28/24 09:50
410-186028-29	Brainerd-01	Drinking Water	08/21/24 17:40	08/28/24 09:50
410-186028-30	Monticello-01	Drinking Water	08/22/24 08:55	08/28/24 09:50
410-186028-31	FB-05	Drinking Water	08/22/24 08:55	08/28/24 09:50
410-186028-32	Pine City	Drinking Water	08/21/24 10:15	08/28/24 09:50





# Chain of Custody Record

<b>Client Information</b>		Sampler: <u>Russell Howard</u>		Lab PM: <u>Brown, Nicole</u>		Carrier Tracking No(s):		COC No: <u>410-127966-35821.3</u>		
Client Contact <u>Russell Howard</u>		Phone: <u>214-300-5496</u>		E-Mail: <u>Nicole.Brown@et.eurofinsus.com</u>		State of Origin: <u>MN</u>		Page: <u>3 of 4</u>		
Company: <u>MN Dept of Military Affairs Facilities Management Office</u>				PWSID:		<b>Analysis Requested</b>				
Address: <u>15000 Highway 115 Camp Ripley Building 2-1</u>		Due Date Requested:		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 533 - PFAS in DW by 533		Total Number of containers		Preservation Codes: <u>I - NH4 Acetate</u>		
City: <u>Little Falls</u>		TAT Requested (days):						Other:		
State, Zip: <u>MN, 56345-4173</u>		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No								
Phone: <u>214-300-5496(Tel)</u>		PO #: <u>P0101-3000050381</u>								
Email: <u>russell.d.howard7.nfg@army.mil</u>		WO #:								
Project Name: <u>533 in drinking water</u>		Project #: <u>41020939</u>		Site:		SSOW#:				
<b>Sample Identification</b>		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/ot, BT=tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	533 - PFAS in DW by 533	Total Number of containers	Special Instructions/Note:
				Preservation Code:						
<u>Chanhassen - 01</u>		<u>8/22/24</u>	<u>1050</u>	<u>G</u>	<u>DW</u>		<u>X</u>		<u>2</u>	
<u>Lakeville - 01</u>			<u>1120</u>		<u>DW</u>		<u>X</u>		<u>2</u>	
<u>Cottage Grove - 01</u>			<u>1200</u>		<u>DW</u>		<u>X</u>		<u>2</u>	
<u>Hastings - 01</u>			<u>1352</u>		<u>DW</u>		<u>X</u>		<u>2</u>	
<u>Red Wing - 01</u>			<u>1432</u>		<u>DW</u>		<u>X</u>		<u>2</u>	
<u>Winona - 01</u>			<u>1000</u>		<u>DW</u>		<u>X</u>		<u>2</u>	
<u>Dwatonna - 01</u>		<u>8/22/24</u>	<u>1805</u>	<u>G</u>	<u>DW</u>		<u>X</u>		<u>2</u>	
<u>FD-02 FD-03</u>		<u>8/22/24</u>		<u>G</u>	<u>DW</u>		<u>X</u>		<u>2</u>	
<u>FD-02</u>		<u>8/21/24</u>		<u>G</u>	<u>DW</u>		<u>X</u>		<u>2</u>	
<u>Not for All</u>					<u>DW</u>		<u>X</u>		<u>2</u>	
<u>Entries</u>		<u>8/23/24</u>			<u>DW</u>		<u>X</u>		<u>2</u>	
<b>Possible Hazard Identification</b>						<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>				
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison/B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements:				
Empty Kit Relinquished by:			Date:		Time:		Method of Shipment:			
Relinquished by: <u>[Signature]</u>		Date/Time: <u>8/23/24 1217</u>		Company:		Received by: <u>[Signature]</u>		Date/Time:		Company: <u>Falex</u>
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:
Relinquished by:		Date/Time:		Company:		Received by: <u>[Signature]</u>		Date/Time: <u>8/28-24 0950</u>		Company: <u>ELLET</u>
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		<u>R3.5-4.1 C 3.5-4.1</u>				

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8/24/24

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# Chain of Custody Record

<b>Client Information</b>		Sampler: <u>Russell Howard</u>		Lab PM: <u>Brown, Nicole</u>		Carrier Tracking No(s):		COC No: <u>410-127966-35821.3</u>		
Client Contact: <u>Russell Howard</u>		Phone: <u>214-300-5496</u>		E-Mail: <u>Nicole.Brown@et.eurofins.com</u>		State of Origin: <u>MN</u>		Page: <u>4 of 4</u>		
Company: <u>MN Dept of Military Affairs Facilities Management Office</u>				PWSID:		<b>Analysis Requested</b>				
Address: <u>15000 Highway 115 Camp Ripley Building 2-1</u>		Due Date Requested:		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 533 - PFAS in DW by 533		Total Number of containers		Preservation Codes: <u>1 - NH4 Acetate</u>		
City: <u>Little Falls</u>		TAT Requested (days):						Other:		
State, Zip: <u>MN, 56345-4173</u>		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No								
Phone: <u>214-300-5496(Tel)</u>		PO #: <u>P0101-3000050381</u>								
Email: <u>russell.d.howard7.nfg@army.mil</u>		WO #:								
Project Name: <u>533 in drinking water</u>		Project #: <u>41020939</u>		Site:		SSOW#:				
<b>Sample Identification</b>		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	533 - PFAS in DW by 533	Total Number of containers	Special Instructions/Note:
				Preservation Code:		X	X	I	X	
<u>Sauk Centre - 01</u>		<u>8/20/24</u>	<u>1000</u>	<u>G</u>	<u>DW</u>		X		2	
<u>FB-03</u>			<u>1000</u>		<u>DW</u>		X		2	
<u>Alexandr. a - 01</u>		<u>↓</u>	<u>1100</u>		<u>DW</u>		X		2	
<u>Fergus Falls - 01</u>		<u>8/20/24</u>	<u>1205</u>		<u>DW</u>		X		2	
<u>Cambr. dgc - 01</u>		<u>8/21/24</u>	<u>0910</u>		<u>DW</u>		X		2	
<u>FB-04</u>			<u>0910</u>		<u>DW</u>		X		2	
<u>Hibbing - 01</u>			<u>1420</u>		<u>DW</u>		X		2	
<u>Chisholm - 01</u>		<u>✓</u>	<u>1450</u>		<u>DW</u>		X		2	
<u>Brainerd - 01</u>		<u>8/21/24</u>	<u>1740</u>		<u>DW</u>		X		2	
<u>Monticello - 01</u>		<u>8/22/24</u>	<u>0855</u>		<u>DW</u>		X		2	
<u>FB-05</u>		<u>8/22/24</u>	<u>0855</u>	<u>G</u>	<u>DW</u>		X		2	
<b>Possible Hazard Identification</b>						<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>				
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison/B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements:				
Empty Kit Relinquished by:			Date:		Time:		Method of Shipment:			
Relinquished by: <u>[Signature]</u>			Date/Time: <u>8/23/24</u>		Company:		Received by: <u>[Signature]</u>		Date/Time:	Company: <u>[Signature]</u>
Relinquished by:			Date/Time:		Company:		Received by:		Date/Time:	Company:
Relinquished by:			Date/Time:		Company:		Received by: <u>[Signature]</u>		Date/Time: <u>8-28-24 0950</u>	Company: <u>ELLET</u>
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <u>RAW 3.9 - 4.1 CO2 3.9 - 4.1</u>						



## Login Sample Receipt Checklist

Client: MN Dept of Military Affairs Facilities Management Office

Job Number: 410-186028-1

**Login Number: 186028**

**List Source: Eurofins Lancaster Laboratories Environment Testing, LLC**

**List Number: 1**

**Creator: Kanagy, Nicholas**

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable, where thermal pres is required (<math>\leq 6^{\circ}\text{C}</math>, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temp acceptable, where thermal pres is required (<math>\leq 6^{\circ}\text{C}</math>, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	False	Received extra samples not listed on COC.
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	