

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Justin Huntley
Union County Water
500 N Main St.
Monroe, North Carolina 28112

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JOB DESCRIPTION

PFAS - 533

JOB NUMBER

810-159086-1

Eurofins Eaton Analytical South Bend

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Authorization



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Definitions/Glossary

Client: Union County Water
Project/Site: PFAS - 533

Job ID: 810-159086-1

Qualifiers

LCMS

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

Glossary

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

Case Narrative

Client: Union County Water
Project: PFAS - 533

Job ID: 810-159086-1

Job ID: 810-159086-1

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Job Narrative 810-159086-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 8/8/2025 9:15 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 10.4°C.

Receipt Exceptions

The following sample(s) was received at the laboratory outside the required temperature criteria: 10.4. This does not meet regulatory requirements. The client was contacted by phone regarding this issue, and the laboratory was instructed to proceed with analysis.

Detection Summary

Client: Union County Water
Project/Site: PFAS - 533

Job ID: 810-159086-1

Client Sample ID: J18-Rehobeth ARV

Lab Sample ID: 810-159086-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	3.1		2.0		ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	6.0		2.0		ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	5.5		2.0		ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	2.7		2.0		ng/L	1		533	Total/NA

Client Sample ID: Y01-Yadkin Finished Water

Lab Sample ID: 810-159086-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.3		2.0		ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	2.4		2.0		ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	2.2		2.0		ng/L	1		533	Total/NA

Client Sample ID: Y02- Yadkin Raw Water

Lab Sample ID: 810-159086-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.6		2.0		ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	2.8		2.0		ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	2.6		2.0		ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	2.7		2.0		ng/L	1		533	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.0		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.5		2.0		ng/L	1		533	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Union County Water
Project/Site: PFAS - 533

Job ID: 810-159086-1

Client Sample ID: J18-Rehobeth ARV

Lab Sample ID: 810-159086-1

Date Collected: 08/07/25 08:44

Matrix: Drinking Water

Date Received: 08/08/25 09:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	3.1		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
Perfluoropentanoic acid (PFPeA)	6.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
Perfluorohexanoic acid (PFHxA)	5.5		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
Perfluorooctanoic acid (PFOA)	2.7		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
Perfluoro(4-methoxybutanoic acid)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1
Perfluoro-3,6-dioxaheptanoic acid	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:19	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	101		50 - 200	08/12/25 09:03	08/13/25 04:19	1
13C5 PFPeA	115		50 - 200	08/12/25 09:03	08/13/25 04:19	1
13C5 PFHxA	101		50 - 200	08/12/25 09:03	08/13/25 04:19	1
13C4 PFHpA	101		50 - 200	08/12/25 09:03	08/13/25 04:19	1
13C8 PFOA	100		50 - 200	08/12/25 09:03	08/13/25 04:19	1
13C9 PFNA	102		50 - 200	08/12/25 09:03	08/13/25 04:19	1
13C6 PFDA	104		50 - 200	08/12/25 09:03	08/13/25 04:19	1
13C7 PFUnA	106		50 - 200	08/12/25 09:03	08/13/25 04:19	1
13C2 PFDoA	104		50 - 200	08/12/25 09:03	08/13/25 04:19	1
13C3 HFPO-DA	96		50 - 200	08/12/25 09:03	08/13/25 04:19	1
13C3 PFBS	109		50 - 200	08/12/25 09:03	08/13/25 04:19	1
13C8 PFOS	104		50 - 200	08/12/25 09:03	08/13/25 04:19	1
13C2-4:2-FTS	114		50 - 200	08/12/25 09:03	08/13/25 04:19	1
13C2-6:2-FTS	106		50 - 200	08/12/25 09:03	08/13/25 04:19	1
13C2-8:2-FTS	114		50 - 200	08/12/25 09:03	08/13/25 04:19	1

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Client Sample Results

Client: Union County Water
Project/Site: PFAS - 533

Job ID: 810-159086-1

Client Sample ID: J18-Rehobeth ARV

Lab Sample ID: 810-159086-1

Date Collected: 08/07/25 08:44

Matrix: Drinking Water

Date Received: 08/08/25 09:15

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	103		50 - 200	08/12/25 09:03	08/13/25 04:19	1

Client Sample ID: Y01-Yadkin Finished Water

Lab Sample ID: 810-159086-2

Date Collected: 08/07/25 10:32

Matrix: Drinking Water

Date Received: 08/08/25 09:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	2.3		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
Perfluoropentanoic acid (PFPeA)	2.4		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
Perfluorohexanoic acid (PFHxA)	2.2		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
Perfluoro(4-methoxybutanoic acid)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1
Perfluoro-3,6-dioxaheptanoic acid	<2.0		2.0		ng/L		08/12/25 09:03	08/13/25 04:32	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	101		50 - 200	08/12/25 09:03	08/13/25 04:32	1
13C5 PFPeA	114		50 - 200	08/12/25 09:03	08/13/25 04:32	1
13C5 PFHxA	98		50 - 200	08/12/25 09:03	08/13/25 04:32	1
13C4 PFHpA	97		50 - 200	08/12/25 09:03	08/13/25 04:32	1
13C8 PFOA	99		50 - 200	08/12/25 09:03	08/13/25 04:32	1
13C9 PFNA	102		50 - 200	08/12/25 09:03	08/13/25 04:32	1
13C6 PFDA	98		50 - 200	08/12/25 09:03	08/13/25 04:32	1

Eurofins Eaton Analytical South Bend

Client Sample Results

Client: Union County Water
Project/Site: PFAS - 533

Job ID: 810-159086-1

Client Sample ID: Y01-Yadkin Finished Water

Lab Sample ID: 810-159086-2

Date Collected: 08/07/25 10:32

Matrix: Drinking Water

Date Received: 08/08/25 09:15

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C7 PFO _n A	103		50 - 200	08/12/25 09:03	08/13/25 04:32	1
13C2 PFDoA	99		50 - 200	08/12/25 09:03	08/13/25 04:32	1
13C3 HFPO-DA	95		50 - 200	08/12/25 09:03	08/13/25 04:32	1
13C3 PFBS	103		50 - 200	08/12/25 09:03	08/13/25 04:32	1
13C8 PFOS	102		50 - 200	08/12/25 09:03	08/13/25 04:32	1
13C2-4:2-FTS	105		50 - 200	08/12/25 09:03	08/13/25 04:32	1
13C2-6:2-FTS	101		50 - 200	08/12/25 09:03	08/13/25 04:32	1
13C2-8:2-FTS	105		50 - 200	08/12/25 09:03	08/13/25 04:32	1
13C3 PFHxS	100		50 - 200	08/12/25 09:03	08/13/25 04:32	1

Client Sample ID: Y02- Yadkin Raw Water

Lab Sample ID: 810-159086-3

Date Collected: 08/07/25 10:41

Matrix: Drinking Water

Date Received: 08/08/25 09:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	2.6		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
Perfluoropentanoic acid (PFPeA)	2.8		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
Perfluorohexanoic acid (PFHxA)	2.6		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
Perfluorooctanoic acid (PFOA)	2.7		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
Perfluorobutanesulfonic acid (PFBS)	2.0		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
Perfluorooctanesulfonic acid (PFOS)	4.5		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<2.0		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	<2.0		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
Perfluoro(4-methoxybutanoic acid)	<2.0		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1

Eurofins Eaton Analytical South Bend

Client Sample Results

Client: Union County Water
 Project/Site: PFAS - 533

Job ID: 810-159086-1

Client Sample ID: Y02- Yadkin Raw Water

Lab Sample ID: 810-159086-3

Date Collected: 08/07/25 10:41

Matrix: Drinking Water

Date Received: 08/08/25 09:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-3,6-dioxaheptanoic acid	<2.0		2.0		ng/L		08/14/25 11:13	08/15/25 20:12	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C4 PFBA	97		50 - 200				08/14/25 11:13	08/15/25 20:12	1
13C5 PFPeA	99		50 - 200				08/14/25 11:13	08/15/25 20:12	1
13C5 PFHxA	94		50 - 200				08/14/25 11:13	08/15/25 20:12	1
13C4 PFHpA	93		50 - 200				08/14/25 11:13	08/15/25 20:12	1
13C8 PFOA	90		50 - 200				08/14/25 11:13	08/15/25 20:12	1
13C9 PFNA	89		50 - 200				08/14/25 11:13	08/15/25 20:12	1
13C6 PFDA	82		50 - 200				08/14/25 11:13	08/15/25 20:12	1
13C7 PFUnA	81		50 - 200				08/14/25 11:13	08/15/25 20:12	1
13C2 PFDoA	81		50 - 200				08/14/25 11:13	08/15/25 20:12	1
13C3 HFPO-DA	88		50 - 200				08/14/25 11:13	08/15/25 20:12	1
13C3 PFBS	104		50 - 200				08/14/25 11:13	08/15/25 20:12	1
13C8 PFOS	97		50 - 200				08/14/25 11:13	08/15/25 20:12	1
13C2-4:2-FTS	113		50 - 200				08/14/25 11:13	08/15/25 20:12	1
13C2-6:2-FTS	99		50 - 200				08/14/25 11:13	08/15/25 20:12	1
13C2-8:2-FTS	103		50 - 200				08/14/25 11:13	08/15/25 20:12	1
13C3 PFHxS	99		50 - 200				08/14/25 11:13	08/15/25 20:12	1

Isotope Dilution Summary

Client: Union County Water
Project/Site: PFAS - 533

Job ID: 810-159086-1

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

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (50-200)	PFPeA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	C6PFDA (50-200)	13C7PUA (50-200)
810-159086-1	J18-Rehobeth ARV	101	115	101	101	100	102	104	106
810-159086-2	Y01-Yadkin Finished Water	101	114	98	97	99	102	98	103
810-159086-3	Y02- Yadkin Raw Water	97	99	94	93	90	89	82	81
LCS 810-155383/3-A	Lab Control Sample	101	99	96	92	98	90	92	94
LCS 810-155820/3-A	Lab Control Sample	100	98	97	94	96	92	94	97
LLCS 810-155383/2-A	Lab Control Sample	94	95	91	93	95	99	102	99
LLCS 810-155820/2-A	Lab Control Sample	101	100	97	99	96	104	98	102
MBL 810-155383/1-A	Method Blank	99	98	96	98	99	103	104	102
MBL 810-155820/1-A	Method Blank	98	99	92	96	94	94	96	96

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (50-200)	HFPODA (50-200)	C3PFBS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)	C3PFHS (50-200)
810-159086-1	J18-Rehobeth ARV	104	96	109	104	114	106	114	103
810-159086-2	Y01-Yadkin Finished Water	99	95	103	102	105	101	105	100
810-159086-3	Y02- Yadkin Raw Water	81	88	104	97	113	99	103	99
LCS 810-155383/3-A	Lab Control Sample	93	97	100	98	109	109	98	101
LCS 810-155820/3-A	Lab Control Sample	95	95	103	101	107	108	109	103
LLCS 810-155383/2-A	Lab Control Sample	97	91	95	96	88	95	104	95
LLCS 810-155820/2-A	Lab Control Sample	94	94	104	99	95	99	106	98
MBL 810-155383/1-A	Method Blank	101	93	97	97	91	94	103	95
MBL 810-155820/1-A	Method Blank	94	90	100	96	91	96	105	95

Surrogate Legend

- PFBA = 13C4 PFBA
- PFPeA = 13C5 PFPeA
- 13C5PHA = 13C5 PFHxA
- C4PFHA = 13C4 PFHpA
- C8PFOA = 13C8 PFOA
- C9PFNA = 13C9 PFNA
- C6PFDA = 13C6 PFDA
- 13C7PUA = 13C7 PFUnA
- PFDoA = 13C2 PFDoA
- HFPODA = 13C3 HFPO-DA
- C3PFBS = 13C3 PFBS
- C8PFOS = 13C8 PFOS
- 42FTS = 13C2-4:2-FTS
- 62FTS = 13C2-6:2-FTS
- 82FTS = 13C2-8:2-FTS
- C3PFHS = 13C3 PFHxS

QC Sample Results

Client: Union County Water
Project/Site: PFAS - 533

Job ID: 810-159086-1

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

Lab Sample ID: MBL 810-155383/1-A
Matrix: Drinking Water
Analysis Batch: 155459

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 155383

Analyte	MBL Result	MBL Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.52		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
Perfluoropentanoic acid (PFPeA)	<0.77		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
Perfluorohexanoic acid (PFHxA)	<0.73		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
Perfluoroheptanoic acid (PFHpA)	<0.72		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
Perfluorooctanoic acid (PFOA)	<0.74		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
Perfluorononanoic acid (PFNA)	<0.73		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
Perfluorodecanoic acid (PFDA)	<0.66		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
Perfluoroundecanoic acid (PFUnA)	<0.70		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
Perfluorododecanoic acid (PFDoA)	<0.70		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
Perfluorobutanesulfonic acid (PFBS)	<0.66		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
Perfluoropentanesulfonic acid (PFPeS)	<0.69		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
Perfluoroheptanesulfonic acid (PFHxS)	<0.66		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.60		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
Perfluorooctanesulfonic acid (PFOS)	<0.69		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.66		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.67		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.68		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.57		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.71		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<0.97		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<0.82		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
Perfluoro(4-methoxybutanoic acid)	<0.65		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.81		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1
Perfluoro-3,6-dioxaheptanoic acid	<0.93		2.0		ng/L		08/12/25 09:03	08/13/25 00:03	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	99		50 - 200	08/12/25 09:03	08/13/25 00:03	1
13C5 PFPeA	98		50 - 200	08/12/25 09:03	08/13/25 00:03	1
13C5 PFHxA	96		50 - 200	08/12/25 09:03	08/13/25 00:03	1
13C4 PFHpA	98		50 - 200	08/12/25 09:03	08/13/25 00:03	1
13C8 PFOA	99		50 - 200	08/12/25 09:03	08/13/25 00:03	1
13C9 PFNA	103		50 - 200	08/12/25 09:03	08/13/25 00:03	1
13C6 PFDA	104		50 - 200	08/12/25 09:03	08/13/25 00:03	1
13C7 PFUnA	102		50 - 200	08/12/25 09:03	08/13/25 00:03	1
13C2 PFDoA	101		50 - 200	08/12/25 09:03	08/13/25 00:03	1
13C3 HFPO-DA	93		50 - 200	08/12/25 09:03	08/13/25 00:03	1
13C3 PFBS	97		50 - 200	08/12/25 09:03	08/13/25 00:03	1
13C8 PFOS	97		50 - 200	08/12/25 09:03	08/13/25 00:03	1
13C2-4:2-FTS	91		50 - 200	08/12/25 09:03	08/13/25 00:03	1

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QC Sample Results

Client: Union County Water
Project/Site: PFAS - 533

Job ID: 810-159086-1

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

Lab Sample ID: MBL 810-155383/1-A
Matrix: Drinking Water
Analysis Batch: 155459

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 155383

Isotope Dilution	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C2-6:2-FTS	94		50 - 200	08/12/25 09:03	08/13/25 00:03	1
13C2-8:2-FTS	103		50 - 200	08/12/25 09:03	08/13/25 00:03	1
13C3 PFHxS	95		50 - 200	08/12/25 09:03	08/13/25 00:03	1

Lab Sample ID: LCS 810-155383/3-A
Matrix: Drinking Water
Analysis Batch: 155459

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 155383

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec
							Limits
Perfluorobutanoic acid (PFBA)	400	377		ng/L		94	70 - 130
Perfluoropentanoic acid (PFPeA)	400	383		ng/L		96	70 - 130
Perfluorohexanoic acid (PFHxA)	400	381		ng/L		95	70 - 130
Perfluoroheptanoic acid (PFHpA)	400	377		ng/L		94	70 - 130
Perfluorooctanoic acid (PFOA)	400	371		ng/L		93	70 - 130
Perfluorononanoic acid (PFNA)	400	381		ng/L		95	70 - 130
Perfluorodecanoic acid (PFDA)	400	365		ng/L		91	70 - 130
Perfluoroundecanoic acid (PFUnA)	400	366		ng/L		91	70 - 130
Perfluorododecanoic acid (PFDoA)	400	376		ng/L		94	70 - 130
Perfluorobutanesulfonic acid (PFBS)	355	337		ng/L		95	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	376	355		ng/L		94	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	365	346		ng/L		95	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	382	359		ng/L		94	70 - 130
Perfluorooctanesulfonic acid (PFOS)	371	349		ng/L		94	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	357	311		ng/L		87	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	375	350		ng/L		93	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	381	374		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	384	371		ng/L		97	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	400	380		ng/L		95	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	378	368		ng/L		97	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	374	359		ng/L		96	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	378	350		ng/L		93	70 - 130
Perfluoro(4-methoxybutanoic acid)	400	377		ng/L		94	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	400	374		ng/L		93	70 - 130
Perfluoro-3,6-dioxaheptanoic acid	400	386		ng/L		96	70 - 130

QC Sample Results

Client: Union County Water
Project/Site: PFAS - 533

Job ID: 810-159086-1

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

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	101		50 - 200
13C5 PFPeA	99		50 - 200
13C5 PFHxA	96		50 - 200
13C4 PFHpA	92		50 - 200
13C8 PFOA	98		50 - 200
13C9 PFNA	90		50 - 200
13C6 PFDA	92		50 - 200
13C7 PFUnA	94		50 - 200
13C2 PFDoA	93		50 - 200
13C3 HFPO-DA	97		50 - 200
13C3 PFBS	100		50 - 200
13C8 PFOS	98		50 - 200
13C2-4:2-FTS	109		50 - 200
13C2-6:2-FTS	109		50 - 200
13C2-8:2-FTS	98		50 - 200
13C3 PFHxS	101		50 - 200

Lab Sample ID: LLCS 810-155383/2-A

Matrix: Drinking Water

Analysis Batch: 155459

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 155383

Analyte	Spike Added	LLCS LLCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Perfluorobutanoic acid (PFBA)	2.00	1.92	J	ng/L		96	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	1.85	J	ng/L		93	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.93	J	ng/L		97	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	1.95	J	ng/L		97	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	1.88	J	ng/L		94	50 - 150
Perfluorononanoic acid (PFNA)	2.00	1.86	J	ng/L		93	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	1.93	J	ng/L		97	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.03		ng/L		102	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.07		ng/L		104	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.78	1.68	J	ng/L		95	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	1.88	1.54	J	ng/L		82	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.83	1.62	J	ng/L		89	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	1.91	1.68	J	ng/L		88	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.86	1.79	J	ng/L		97	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	1.78	1.87	J	ng/L		105	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.88	1.75	J	ng/L		94	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.90	1.90	J	ng/L		100	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.92	1.96	J	ng/L		102	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	2.00	1.88	J	ng/L		94	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.89	1.81	J	ng/L		95	50 - 150

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QC Sample Results

Client: Union County Water
Project/Site: PFAS - 533

Job ID: 810-159086-1

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

Lab Sample ID: LLCS 810-155383/2-A
Matrix: Drinking Water
Analysis Batch: 155459

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 155383

Analyte	Spike Added	LLCS	LLCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
9-Chlorohexadecafluoro-3-oxan onane-1-sulfonic acid	1.87	1.81	J	ng/L		97	50 - 150
11-Chloroeicosfluoro-3-oxaund ecane-1-sulfonic acid	1.89	1.77	J	ng/L		94	50 - 150
Perfluoro(4-methoxybutanoic acid)	2.00	1.83	J	ng/L		92	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	1.89	J	ng/L		95	50 - 150
Perfluoro-3,6-dioxaheptanoic acid	2.00	2.03		ng/L		101	50 - 150

Isotope Dilution	LLCS	LLCS	Limits
	%Recovery	Qualifier	
13C4 PFBA	94		50 - 200
13C5 PFPeA	95		50 - 200
13C5 PFHxA	91		50 - 200
13C4 PFHpA	93		50 - 200
13C8 PFOA	95		50 - 200
13C9 PFNA	99		50 - 200
13C6 PFDA	102		50 - 200
13C7 PFUnA	99		50 - 200
13C2 PFDoA	97		50 - 200
13C3 HFPO-DA	91		50 - 200
13C3 PFBS	95		50 - 200
13C8 PFOS	96		50 - 200
13C2-4:2-FTS	88		50 - 200
13C2-6:2-FTS	95		50 - 200
13C2-8:2-FTS	104		50 - 200
13C3 PFHxS	95		50 - 200

Lab Sample ID: MBL 810-155820/1-A
Matrix: Drinking Water
Analysis Batch: 156055

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 155820

Analyte	MBL	MBL	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorobutanoic acid (PFBA)	<0.52		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
Perfluoropentanoic acid (PFPeA)	<0.77		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
Perfluorohexanoic acid (PFHxA)	<0.73		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
Perfluoroheptanoic acid (PFHpA)	<0.72		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
Perfluorooctanoic acid (PFOA)	<0.74		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
Perfluorononanoic acid (PFNA)	<0.73		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
Perfluorodecanoic acid (PFDA)	<0.66		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
Perfluoroundecanoic acid (PFUnA)	<0.70		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
Perfluorododecanoic acid (PFDoA)	<0.70		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
Perfluorobutanesulfonic acid (PFBS)	<0.66		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
Perfluoropentanesulfonic acid (PFPeS)	<0.69		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
Perfluorohexanesulfonic acid (PFHxS)	<0.66		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.60		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
Perfluorooctanesulfonic acid (PFOS)	<0.69		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1

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QC Sample Results

Client: Union County Water
Project/Site: PFAS - 533

Job ID: 810-159086-1

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

Lab Sample ID: MBL 810-155820/1-A
Matrix: Drinking Water
Analysis Batch: 156055

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 155820

Analyte	MBL	MBL	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.66		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.67		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.68		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.57		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.71		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<0.97		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<0.82		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
Perfluoro(4-methoxybutanoic acid)	<0.65		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.81		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1
Perfluoro-3,6-dioxaheptanoic acid	<0.93		2.0		ng/L		08/14/25 11:13	08/15/25 17:20	1

Isotope Dilution	MBL	MBL	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C4 PFBA	98		50 - 200	08/14/25 11:13	08/15/25 17:20	1
13C5 PFPeA	99		50 - 200	08/14/25 11:13	08/15/25 17:20	1
13C5 PFHxA	92		50 - 200	08/14/25 11:13	08/15/25 17:20	1
13C4 PFHpA	96		50 - 200	08/14/25 11:13	08/15/25 17:20	1
13C8 PFOA	94		50 - 200	08/14/25 11:13	08/15/25 17:20	1
13C9 PFNA	94		50 - 200	08/14/25 11:13	08/15/25 17:20	1
13C6 PFDA	96		50 - 200	08/14/25 11:13	08/15/25 17:20	1
13C7 PFUnA	96		50 - 200	08/14/25 11:13	08/15/25 17:20	1
13C2 PFDoA	94		50 - 200	08/14/25 11:13	08/15/25 17:20	1
13C3 HFPO-DA	90		50 - 200	08/14/25 11:13	08/15/25 17:20	1
13C3 PFBS	100		50 - 200	08/14/25 11:13	08/15/25 17:20	1
13C8 PFOS	96		50 - 200	08/14/25 11:13	08/15/25 17:20	1
13C2-4:2-FTS	91		50 - 200	08/14/25 11:13	08/15/25 17:20	1
13C2-6:2-FTS	96		50 - 200	08/14/25 11:13	08/15/25 17:20	1
13C2-8:2-FTS	105		50 - 200	08/14/25 11:13	08/15/25 17:20	1
13C3 PFHxS	95		50 - 200	08/14/25 11:13	08/15/25 17:20	1

Lab Sample ID: LCS 810-155820/3-A
Matrix: Drinking Water
Analysis Batch: 156055

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 155820

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Perfluorobutanoic acid (PFBA)	200	199		ng/L		99	70 - 130
Perfluoropentanoic acid (PFPeA)	200	202		ng/L		101	70 - 130
Perfluorohexanoic acid (PFHxA)	200	196		ng/L		98	70 - 130
Perfluoroheptanoic acid (PFHpA)	200	206		ng/L		103	70 - 130
Perfluorooctanoic acid (PFOA)	200	198		ng/L		99	70 - 130
Perfluorononanoic acid (PFNA)	200	204		ng/L		102	70 - 130
Perfluorodecanoic acid (PFDA)	200	209		ng/L		105	70 - 130

Eurofins Eaton Analytical South Bend

QC Sample Results

Client: Union County Water
Project/Site: PFAS - 533

Job ID: 810-159086-1

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

Lab Sample ID: LCS 810-155820/3-A

Matrix: Drinking Water

Analysis Batch: 156055

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 155820

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	200	205		ng/L		103	70 - 130
Perfluorododecanoic acid (PFDoA)	200	202		ng/L		101	70 - 130
Perfluorobutanesulfonic acid (PFBS)	178	182		ng/L		102	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	188	198		ng/L		105	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	183	188		ng/L		103	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	191	206		ng/L		108	70 - 130
Perfluorooctanesulfonic acid (PFOS)	186	190		ng/L		102	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	178	184		ng/L		103	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	188	193		ng/L		103	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	190	196		ng/L		103	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	192	197		ng/L		103	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	200	204		ng/L		102	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	189	200		ng/L		106	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	187	188		ng/L		101	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	189	191		ng/L		101	70 - 130
Perfluoro(4-methoxybutanoic acid)	200	203		ng/L		102	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	200	198		ng/L		99	70 - 130
Perfluoro-3,6-dioxaheptanoic acid	200	195		ng/L		97	70 - 130

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	100		50 - 200
13C5 PFPeA	98		50 - 200
13C5 PFHxA	97		50 - 200
13C4 PFHpA	94		50 - 200
13C8 PFOA	96		50 - 200
13C9 PFNA	92		50 - 200
13C6 PFDA	94		50 - 200
13C7 PFUnA	97		50 - 200
13C2 PFDoA	95		50 - 200
13C3 HFPO-DA	95		50 - 200
13C3 PFBS	103		50 - 200
13C8 PFOS	101		50 - 200
13C2-4:2-FTS	107		50 - 200
13C2-6:2-FTS	108		50 - 200
13C2-8:2-FTS	109		50 - 200

Eurofins Eaton Analytical South Bend

QC Sample Results

Client: Union County Water
Project/Site: PFAS - 533

Job ID: 810-159086-1

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

Lab Sample ID: LCS 810-155820/3-A

Matrix: Drinking Water

Analysis Batch: 156055

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 155820

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C3 PFHxS	103		50 - 200

Lab Sample ID: LLCS 810-155820/2-A

Matrix: Drinking Water

Analysis Batch: 156055

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 155820

Analyte	Spike Added	LLCS LLCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Perfluorobutanoic acid (PFBA)	2.00	1.87	J	ng/L		94	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	1.96	J	ng/L		98	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.87	J	ng/L		93	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	1.93	J	ng/L		96	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	1.95	J	ng/L		98	50 - 150
Perfluorononanoic acid (PFNA)	2.00	1.80	J	ng/L		90	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.07		ng/L		103	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	1.99	J	ng/L		100	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.02		ng/L		101	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.78	1.73	J	ng/L		97	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	1.88	1.82	J	ng/L		97	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.83	1.72	J	ng/L		94	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	1.91	1.77	J	ng/L		93	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.86	1.79	J	ng/L		97	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	1.78	1.89	J	ng/L		106	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.88	2.11		ng/L		112	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.90	1.77	J	ng/L		93	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.92	1.94	J	ng/L		101	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	2.00	1.94	J	ng/L		97	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.89	1.82	J	ng/L		96	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	1.87	1.76	J	ng/L		94	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	1.89	1.80	J	ng/L		96	50 - 150
Perfluoro(4-methoxybutanoic acid)	2.00	2.06		ng/L		103	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	1.84	J	ng/L		92	50 - 150
Perfluoro-3,6-dioxaheptanoic acid	2.00	1.94	J	ng/L		97	50 - 150

Isotope Dilution	LLCS LLCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	101		50 - 200

QC Sample Results

Client: Union County Water
 Project/Site: PFAS - 533

Job ID: 810-159086-1

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

Lab Sample ID: LLCS 810-155820/2-A
Matrix: Drinking Water
Analysis Batch: 156055

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 155820

<i>Isotope Dilution</i>	<i>LLCS</i>	<i>LLCS</i>	<i>Limits</i>
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
13C5 PFPeA	100		50 - 200
13C5 PFHxA	97		50 - 200
13C4 PFHpA	99		50 - 200
13C8 PFOA	96		50 - 200
13C9 PFNA	104		50 - 200
13C6 PFDA	98		50 - 200
13C7 PFUnA	102		50 - 200
13C2 PFDoA	94		50 - 200
13C3 HFPO-DA	94		50 - 200
13C3 PFBS	104		50 - 200
13C8 PFOS	99		50 - 200
13C2-4:2-FTS	95		50 - 200
13C2-6:2-FTS	99		50 - 200
13C2-8:2-FTS	106		50 - 200
13C3 PFHxS	98		50 - 200

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QC Association Summary

Client: Union County Water
 Project/Site: PFAS - 533

Job ID: 810-159086-1

LCMS

Prep Batch: 155383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-159086-1	J18-Rehobeth ARV	Total/NA	Drinking Water	533	
810-159086-2	Y01-Yadkin Finished Water	Total/NA	Drinking Water	533	
MBL 810-155383/1-A	Method Blank	Total/NA	Drinking Water	533	
LCS 810-155383/3-A	Lab Control Sample	Total/NA	Drinking Water	533	
LLCS 810-155383/2-A	Lab Control Sample	Total/NA	Drinking Water	533	

Analysis Batch: 155459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-159086-1	J18-Rehobeth ARV	Total/NA	Drinking Water	533	155383
810-159086-2	Y01-Yadkin Finished Water	Total/NA	Drinking Water	533	155383
MBL 810-155383/1-A	Method Blank	Total/NA	Drinking Water	533	155383
LCS 810-155383/3-A	Lab Control Sample	Total/NA	Drinking Water	533	155383
LLCS 810-155383/2-A	Lab Control Sample	Total/NA	Drinking Water	533	155383

Prep Batch: 155820

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-159086-3	Y02- Yadkin Raw Water	Total/NA	Drinking Water	533	
MBL 810-155820/1-A	Method Blank	Total/NA	Drinking Water	533	
LCS 810-155820/3-A	Lab Control Sample	Total/NA	Drinking Water	533	
LLCS 810-155820/2-A	Lab Control Sample	Total/NA	Drinking Water	533	

Analysis Batch: 156055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-159086-3	Y02- Yadkin Raw Water	Total/NA	Drinking Water	533	155820
MBL 810-155820/1-A	Method Blank	Total/NA	Drinking Water	533	155820
LCS 810-155820/3-A	Lab Control Sample	Total/NA	Drinking Water	533	155820
LLCS 810-155820/2-A	Lab Control Sample	Total/NA	Drinking Water	533	155820

Lab Chronicle

Client: Union County Water
Project/Site: PFAS - 533

Job ID: 810-159086-1

Client Sample ID: J18-Rehobeth ARV

Lab Sample ID: 810-159086-1

Date Collected: 08/07/25 08:44

Matrix: Drinking Water

Date Received: 08/08/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			155383	BAB	EA SB	08/12/25 09:03
Total/NA	Analysis	533		1	155459	MH	EA SB	08/13/25 04:19

Client Sample ID: Y01-Yadkin Finished Water

Lab Sample ID: 810-159086-2

Date Collected: 08/07/25 10:32

Matrix: Drinking Water

Date Received: 08/08/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			155383	BAB	EA SB	08/12/25 09:03
Total/NA	Analysis	533		1	155459	MH	EA SB	08/13/25 04:32

Client Sample ID: Y02- Yadkin Raw Water

Lab Sample ID: 810-159086-3

Date Collected: 08/07/25 10:41

Matrix: Drinking Water

Date Received: 08/08/25 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			155820	KB	EA SB	08/14/25 11:13
Total/NA	Analysis	533		1	156055	MH	EA SB	08/15/25 20:12

Laboratory References:

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Accreditation/Certification Summary

Client: Union County Water
 Project/Site: PFAS - 533

Job ID: 810-159086-1

Laboratory: Eurofins Eaton Analytical South Bend

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

Authority	Program	Identification Number	Expiration Date
North Carolina (DW)	State	18700	07-31-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
533	533	Drinking Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid
533	533	Drinking Water	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)
533	533	Drinking Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
533	533	Drinking Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid
533	533	Drinking Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
533	533	Drinking Water	Perfluoro(4-methoxybutanoic acid)
533	533	Drinking Water	Perfluoro-3,6-dioxaheptanoic acid
533	533	Drinking Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
533	533	Drinking Water	Perfluorobutanoic acid (PFBA)
533	533	Drinking Water	Perfluorodecanoic acid (PFDA)
533	533	Drinking Water	Perfluorododecanoic acid (PFDoA)
533	533	Drinking Water	Perfluoroheptanesulfonic acid (PFHpS)
533	533	Drinking Water	Perfluoroheptanoic acid (PFHpA)
533	533	Drinking Water	Perfluorohexanoic acid (PFHxA)
533	533	Drinking Water	Perfluoropentanesulfonic acid (PFPeS)
533	533	Drinking Water	Perfluoropentanoic acid (PFPeA)
533	533	Drinking Water	Perfluoroundecanoic acid (PFUnA)

Method Summary

Client: Union County Water
Project/Site: PFAS - 533

Job ID: 810-159086-1

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA SB
533	Extraction of Perfluorinated and Polyfluorinated Alkyl Acids	EPA	EA SB

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777



Sample Summary

Client: Union County Water
Project/Site: PFAS - 533

Job ID: 810-159086-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
810-159086-1	J18-Rehobeth ARV	Drinking Water	08/07/25 08:44	08/08/25 09:15	North Carolina
810-159086-2	Y01-Yadkin Finished Water	Drinking Water	08/07/25 10:32	08/08/25 09:15	North Carolina
810-159086-3	Y02- Yadkin Raw Water	Drinking Water	08/07/25 10:41	08/08/25 09:15	North Carolina

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Login Sample Receipt Checklist

Client: Union County Water

Job Number: 810-159086-1

Login Number: 159086

List Source: Eurofins Eaton Analytical South Bend

List Number: 1

Creator: Moffitt, Tisha

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	False	Water present in cooler; indicates evidence of melted ice.
Cooler Temperature is acceptable.	False	Cooler temperature outside required temperature criteria.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Were samples preserved to correct pH upon receipt, if applicable?	True	
Container provided by EEA	True	