



# ANALYTICAL REPORT

## PREPARED FOR

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Union County Water  
500 N Main St.  
Monroe, North Carolina 28112

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## JOB DESCRIPTION

PFAS - 533

## JOB NUMBER

810-123429-1

# 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: 810-123429-1

## 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: 810-123429-1

**Job ID: 810-123429-1**

**Eurofins Eaton Analytical South Bend**

## **Job Narrative 810-123429-1**

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 10/9/2024 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 0.6°C.

### **PFAS**

Method 533: The pH of the following samples were adjusted to pH 7.5 in the laboratory: J18- Rehobeth ARV (810-123429-1) and (810-123429-B-1 DU)

Method 533: The pH of the following samples were adjusted to pH 7.5 in the laboratory: Y01- Yadkin Finished Water (810-123429-2), Y02- Yadkin Raw Water (810-123429-3) and (810-123429-C-2 MS)

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

# Detection Summary

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

Job ID: 810-123429-1

## Client Sample ID: J18- Rehobeth ARV

Lab Sample ID: 810-123429-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.6		1.9		ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	5.9		1.9		ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	4.8		1.9		ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	2.7		1.9		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.9		1.9		ng/L	1		533	Total/NA

## Client Sample ID: Y01- Yadkin Finished Water

Lab Sample ID: 810-123429-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.3		1.9		ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	1.9		1.9		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.9		1.9		ng/L	1		533	Total/NA

## Client Sample ID: Y02- Yadkin Raw Water

Lab Sample ID: 810-123429-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.2		1.9		ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	2.0		1.9		ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	2.1		1.9		ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	2.0		1.9		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.9		1.9		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: 810-123429-1

**Client Sample ID: J18- Rehobeth ARV**

**Lab Sample ID: 810-123429-1**

Date Collected: 10/08/24 09:10

Matrix: Drinking Water

Date Received: 10/09/24 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		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
Perfluoropentanoic acid (PFPeA)	5.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
Perfluorohexanoic acid (PFHxA)	4.8		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
Perfluoroheptanoic acid (PFHpA)	<1.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
Perfluorooctanoic acid (PFOA)	2.7		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
Perfluorononanoic acid (PFNA)	<1.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
Perfluorodecanoic acid (PFDA)	<1.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
Perfluorobutanesulfonic acid (PFBS)	<1.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
Perfluoropentanesulfonic acid (PFPeS)	<1.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
Perfluorohexanesulfonic acid (PFHxS)	<1.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
Perfluorooctanesulfonic acid (PFOS)	2.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<1.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<1.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<1.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
Perfluoro(4-methoxybutanoic acid)	<1.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1
Perfluoro-3,6-dioxaheptanoic acid	<1.9		1.9		ng/L		10/14/24 07:20	10/14/24 19:49	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	109		50 - 200	10/14/24 07:20	10/14/24 19:49	1
13C5 PFPeA	140		50 - 200	10/14/24 07:20	10/14/24 19:49	1
13C5 PFHxA	108		50 - 200	10/14/24 07:20	10/14/24 19:49	1
13C4 PFHpA	102		50 - 200	10/14/24 07:20	10/14/24 19:49	1
13C8 PFOA	96		50 - 200	10/14/24 07:20	10/14/24 19:49	1
13C9 PFNA	88		50 - 200	10/14/24 07:20	10/14/24 19:49	1
13C6 PFDA	82		50 - 200	10/14/24 07:20	10/14/24 19:49	1
13C7 PFUnA	82		50 - 200	10/14/24 07:20	10/14/24 19:49	1
13C2 PFDoA	79		50 - 200	10/14/24 07:20	10/14/24 19:49	1
13C3 HFPO-DA	102		50 - 200	10/14/24 07:20	10/14/24 19:49	1
13C3 PFBS	113		50 - 200	10/14/24 07:20	10/14/24 19:49	1
13C8 PFOS	110		50 - 200	10/14/24 07:20	10/14/24 19:49	1
13C2-4:2-FTS	129		50 - 200	10/14/24 07:20	10/14/24 19:49	1
13C2-6:2-FTS	112		50 - 200	10/14/24 07:20	10/14/24 19:49	1

Eurofins Eaton Analytical South Bend

# Client Sample Results

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

Job ID: 810-123429-1

## Client Sample ID: J18- Rehobeth ARV

Lab Sample ID: 810-123429-1

Date Collected: 10/08/24 09:10

Matrix: Drinking Water

Date Received: 10/09/24 09:15

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-8:2-FTS	118		50 - 200	10/14/24 07:20	10/14/24 19:49	1
13C3 PFHxS	107		50 - 200	10/14/24 07:20	10/14/24 19:49	1

## Client Sample ID: Y01- Yadkin Finished Water

Lab Sample ID: 810-123429-2

Date Collected: 10/08/24 10:20

Matrix: Drinking Water

Date Received: 10/09/24 09:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Perfluorobutanoic acid (PFBA)</b>	<b>2.3</b>		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
Perfluoropentanoic acid (PFPeA)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
<b>Perfluorohexanoic acid (PFHxA)</b>	<b>1.9</b>		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
Perfluoroheptanoic acid (PFHpA)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
Perfluorooctanoic acid (PFOA)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
Perfluorononanoic acid (PFNA)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
Perfluorodecanoic acid (PFDA)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
Perfluorobutanesulfonic acid (PFBS)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
Perfluoropentanesulfonic acid (PFPeS)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
Perfluorohexanesulfonic acid (PFHxS)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
<b>Perfluorooctanesulfonic acid (PFOS)</b>	<b>1.9</b>		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
Perfluoro(4-methoxybutanoic acid)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1
Perfluoro-3,6-dioxaheptanoic acid	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 01:38	1

  

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	105		50 - 200	10/14/24 08:40	10/15/24 01:38	1
13C5 PFPeA	130		50 - 200	10/14/24 08:40	10/15/24 01:38	1
13C5 PFHxA	105		50 - 200	10/14/24 08:40	10/15/24 01:38	1
13C4 PFHpA	99		50 - 200	10/14/24 08:40	10/15/24 01:38	1
13C8 PFOA	95		50 - 200	10/14/24 08:40	10/15/24 01:38	1
13C9 PFNA	87		50 - 200	10/14/24 08:40	10/15/24 01:38	1

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# Client Sample Results

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

Job ID: 810-123429-1

## Client Sample ID: Y01- Yadkin Finished Water

Lab Sample ID: 810-123429-2

Date Collected: 10/08/24 10:20

Matrix: Drinking Water

Date Received: 10/09/24 09:15

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C6 PFDA	81		50 - 200	10/14/24 08:40	10/15/24 01:38	1
13C7 PFOA	78		50 - 200	10/14/24 08:40	10/15/24 01:38	1
13C2 PFDoA	83		50 - 200	10/14/24 08:40	10/15/24 01:38	1
13C3 HFPO-DA	97		50 - 200	10/14/24 08:40	10/15/24 01:38	1
13C3 PFBS	109		50 - 200	10/14/24 08:40	10/15/24 01:38	1
13C8 PFOS	105		50 - 200	10/14/24 08:40	10/15/24 01:38	1
13C2-4:2-FTS	117		50 - 200	10/14/24 08:40	10/15/24 01:38	1
13C2-6:2-FTS	105		50 - 200	10/14/24 08:40	10/15/24 01:38	1
13C2-8:2-FTS	110		50 - 200	10/14/24 08:40	10/15/24 01:38	1
13C3 PFHxS	106		50 - 200	10/14/24 08:40	10/15/24 01:38	1

## Client Sample ID: Y02- Yadkin Raw Water

Lab Sample ID: 810-123429-3

Date Collected: 10/08/24 10:15

Matrix: Drinking Water

Date Received: 10/09/24 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)	2.2		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
Perfluoropentanoic acid (PFPeA)	2.0		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
Perfluorohexanoic acid (PFHxA)	2.1		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
Perfluoroheptanoic acid (PFHpA)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
Perfluorooctanoic acid (PFOA)	2.0		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
Perfluorononanoic acid (PFNA)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
Perfluorodecanoic acid (PFDA)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
Perfluorobutanesulfonic acid (PFBS)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
Perfluoropentanesulfonic acid (PFPeS)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
Perfluorohexanesulfonic acid (PFHxS)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
Perfluorooctanesulfonic acid (PFOS)	3.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
Perfluoro(4-methoxybutanoic acid)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	1

Eurofins Eaton Analytical South Bend

# Client Sample Results

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

Job ID: 810-123429-1

**Client Sample ID: Y02- Yadkin Raw Water**

**Lab Sample ID: 810-123429-3**

Date Collected: 10/08/24 10:15

Matrix: Drinking Water

Date Received: 10/09/24 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	<1.9		1.9		ng/L		10/14/24 08:40	10/15/24 05:14	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	106		50 - 200				10/14/24 08:40	10/15/24 05:14	1
13C5 PFPeA	154		50 - 200				10/14/24 08:40	10/15/24 05:14	1
13C5 PFHxA	107		50 - 200				10/14/24 08:40	10/15/24 05:14	1
13C4 PFHpA	104		50 - 200				10/14/24 08:40	10/15/24 05:14	1
13C8 PFOA	100		50 - 200				10/14/24 08:40	10/15/24 05:14	1
13C9 PFNA	101		50 - 200				10/14/24 08:40	10/15/24 05:14	1
13C6 PFDA	95		50 - 200				10/14/24 08:40	10/15/24 05:14	1
13C7 PFUnA	88		50 - 200				10/14/24 08:40	10/15/24 05:14	1
13C2 PFDoA	90		50 - 200				10/14/24 08:40	10/15/24 05:14	1
13C3 HFPO-DA	99		50 - 200				10/14/24 08:40	10/15/24 05:14	1
13C3 PFBS	109		50 - 200				10/14/24 08:40	10/15/24 05:14	1
13C8 PFOS	107		50 - 200				10/14/24 08:40	10/15/24 05:14	1
13C2-4:2-FTS	150		50 - 200				10/14/24 08:40	10/15/24 05:14	1
13C2-6:2-FTS	114		50 - 200				10/14/24 08:40	10/15/24 05:14	1
13C2-8:2-FTS	112		50 - 200				10/14/24 08:40	10/15/24 05:14	1
13C3 PFHxS	106		50 - 200				10/14/24 08:40	10/15/24 05:14	1

# Isotope Dilution Summary

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

Job ID: 810-123429-1

## 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)
810-123429-1	J18- Rehobeth ARV	109	140	108	102	96	88	82	82
810-123429-1 DU	J18- Rehobeth ARV	105	136	105	98	94	91	86	80
810-123429-2	Y01- Yadkin Finished Water	105	130	105	99	95	87	81	78
810-123429-2 MS	Y01- Yadkin Finished Water	107	127	103	100	99	94	90	87
810-123429-3	Y02- Yadkin Raw Water	106	154	107	104	100	101	95	88
LCS 810-118658/3-A	Lab Control Sample	105	105	103	102	105	102	101	102
LCS 810-118673/3-A	Lab Control Sample	100	101	100	98	103	98	98	99
LLCS 810-118658/2-A	Lab Control Sample	100	104	101	101	104	106	103	103
LLCS 810-118673/2-A	Lab Control Sample	103	103	102	103	103	108	105	105
MBL 810-118658/1-A	Method Blank	104	107	105	102	105	105	102	102
MBL 810-118673/1-A	Method Blank	105	107	105	105	105	109	108	109

### 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)
810-123429-1	J18- Rehobeth ARV	79	102	113	110	129	112	118	107
810-123429-1 DU	J18- Rehobeth ARV	75	96	110	106	125	114	114	107
810-123429-2	Y01- Yadkin Finished Water	83	97	109	105	117	105	110	106
810-123429-2 MS	Y01- Yadkin Finished Water	83	101	107	108	131	115	115	106
810-123429-3	Y02- Yadkin Raw Water	90	99	109	107	150	114	112	106
LCS 810-118658/3-A	Lab Control Sample	100	100	104	104	108	116	109	103
LCS 810-118673/3-A	Lab Control Sample	100	102	103	106	117	121	114	103
LLCS 810-118658/2-A	Lab Control Sample	102	97	110	107	96	106	108	110
LLCS 810-118673/2-A	Lab Control Sample	106	99	106	106	94	101	108	106
MBL 810-118658/1-A	Method Blank	102	98	105	105	95	101	105	106
MBL 810-118673/1-A	Method Blank	109	103	109	109	94	100	108	108

#### 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: 810-123429-1

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

**Lab Sample ID: MBL 810-118658/1-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 118703**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 118658**

Analyte	MBL Result	MBL Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.52		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
Perfluorohexanoic acid (PFHxA)	<0.42		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
Perfluoroheptanoic acid (PFHpA)	<0.40		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
Perfluorononanoic acid (PFNA)	<0.38		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
Perfluorodecanoic acid (PFDA)	<0.36		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
Perfluoroundecanoic acid (PFUnA)	<0.38		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
Perfluorododecanoic acid (PFDoA)	<0.35		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
Perfluorobutanesulfonic acid (PFBS)	<0.42		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
Perfluoropentanesulfonic acid (PFPeS)	<0.37		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
Perfluorohexanesulfonic acid (PFHxS)	<0.39		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.44		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
Perfluorooctanesulfonic acid (PFOS)	<0.39		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.45		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.56		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.68		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.57		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.53		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.40		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<0.45		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<0.51		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
Perfluoro(4-methoxybutanoic acid)	<0.35		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.32		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1
Perfluoro-3,6-dioxaheptanoic acid	<0.93		2.0		ng/L		10/14/24 07:20	10/14/24 18:42	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	104		50 - 200	10/14/24 07:20	10/14/24 18:42	1
13C5 PFPeA	107		50 - 200	10/14/24 07:20	10/14/24 18:42	1
13C5 PFHxA	105		50 - 200	10/14/24 07:20	10/14/24 18:42	1
13C4 PFHpA	102		50 - 200	10/14/24 07:20	10/14/24 18:42	1
13C8 PFOA	105		50 - 200	10/14/24 07:20	10/14/24 18:42	1
13C9 PFNA	105		50 - 200	10/14/24 07:20	10/14/24 18:42	1
13C6 PFDA	102		50 - 200	10/14/24 07:20	10/14/24 18:42	1
13C7 PFUnA	102		50 - 200	10/14/24 07:20	10/14/24 18:42	1
13C2 PFDoA	102		50 - 200	10/14/24 07:20	10/14/24 18:42	1
13C3 HFPO-DA	98		50 - 200	10/14/24 07:20	10/14/24 18:42	1
13C3 PFBS	105		50 - 200	10/14/24 07:20	10/14/24 18:42	1
13C8 PFOS	105		50 - 200	10/14/24 07:20	10/14/24 18:42	1
13C2-4:2-FTS	95		50 - 200	10/14/24 07:20	10/14/24 18:42	1

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# QC Sample Results

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

Job ID: 810-123429-1

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

**Lab Sample ID: MBL 810-118658/1-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 118703**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 118658**

Isotope Dilution	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C2-6:2-FTS	101		50 - 200	10/14/24 07:20	10/14/24 18:42	1
13C2-8:2-FTS	105		50 - 200	10/14/24 07:20	10/14/24 18:42	1
13C3 PFHxS	106		50 - 200	10/14/24 07:20	10/14/24 18:42	1

**Lab Sample ID: LCS 810-118658/3-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 118703**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 118658**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanoic acid (PFPeA)	200	197		ng/L		98	70 - 130
Perfluorohexanoic acid (PFHxA)	200	190		ng/L		95	70 - 130
Perfluoroheptanoic acid (PFHpA)	200	197		ng/L		98	70 - 130
Perfluorooctanoic acid (PFOA)	200	192		ng/L		96	70 - 130
Perfluorononanoic acid (PFNA)	200	192		ng/L		96	70 - 130
Perfluorodecanoic acid (PFDA)	200	196		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	200	198		ng/L		99	70 - 130
Perfluorododecanoic acid (PFDoA)	200	197		ng/L		98	70 - 130
Perfluorobutanesulfonic acid (PFBS)	178	175		ng/L		98	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	188	183		ng/L		97	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	183	177		ng/L		97	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	191	185		ng/L		97	70 - 130
Perfluorooctanesulfonic acid (PFOS)	186	180		ng/L		97	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	178	172		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	188	180		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	190	182		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	192	187		ng/L		97	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	200	195		ng/L		97	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	189	187		ng/L		99	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	187	173		ng/L		93	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	189	183		ng/L		97	70 - 130
Perfluoro(4-methoxybutanoic acid)	200	193		ng/L		96	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	200	195		ng/L		97	70 - 130
Perfluoro-3,6-dioxaheptanoic acid	200	195		ng/L		97	70 - 130

# QC Sample Results

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

Job ID: 810-123429-1

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

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	105		50 - 200
13C5 PFPeA	105		50 - 200
13C5 PFHxA	103		50 - 200
13C4 PFHpA	102		50 - 200
13C8 PFOA	105		50 - 200
13C9 PFNA	102		50 - 200
13C6 PFDA	101		50 - 200
13C7 PFUnA	102		50 - 200
13C2 PFDoA	100		50 - 200
13C3 HFPO-DA	100		50 - 200
13C3 PFBS	104		50 - 200
13C8 PFOS	104		50 - 200
13C2-4:2-FTS	108		50 - 200
13C2-6:2-FTS	116		50 - 200
13C2-8:2-FTS	109		50 - 200
13C3 PFHxS	103		50 - 200

Lab Sample ID: LLCS 810-118658/2-A

Matrix: Drinking Water

Analysis Batch: 118703

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 118658

Analyte	Spike Added	LLCS LLCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Perfluorobutanoic acid (PFBA)	2.00	1.75	J	ng/L		87	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	1.82	J	ng/L		91	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.64	J	ng/L		82	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	1.64	J	ng/L		82	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	1.62	J	ng/L		81	50 - 150
Perfluorononanoic acid (PFNA)	2.00	1.65	J	ng/L		83	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	1.73	J	ng/L		87	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	1.68	J	ng/L		84	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	1.74	J	ng/L		87	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.78	1.48	J	ng/L		83	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	1.88	1.41	J	ng/L		75	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.83	1.43	J	ng/L		78	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	1.91	1.62	J	ng/L		85	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.86	1.61	J	ng/L		87	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	1.78	1.65	J	ng/L		93	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.88	1.48	J	ng/L		79	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.90	1.68	J	ng/L		88	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.92	1.63	J	ng/L		85	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	2.00	1.78	J	ng/L		89	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.89	1.62	J	ng/L		86	50 - 150

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# QC Sample Results

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

Job ID: 810-123429-1

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

**Lab Sample ID: LLCS 810-118658/2-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 118703**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 118658**

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	1.87	1.46	J	ng/L		78	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	1.89	1.51	J	ng/L		80	50 - 150
Perfluoro(4-methoxybutanoic acid)	2.00	1.72	J	ng/L		86	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	1.72	J	ng/L		86	50 - 150
Perfluoro-3,6-dioxaheptanoic acid	2.00	1.63	J	ng/L		82	50 - 150

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	LLCS Limits
13C4 PFBA	100		50 - 200
13C5 PFPeA	104		50 - 200
13C5 PFHxA	101		50 - 200
13C4 PFHpA	101		50 - 200
13C8 PFOA	104		50 - 200
13C9 PFNA	106		50 - 200
13C6 PFDA	103		50 - 200
13C7 PFUnA	103		50 - 200
13C2 PFDoA	102		50 - 200
13C3 HFPO-DA	97		50 - 200
13C3 PFBS	110		50 - 200
13C8 PFOS	107		50 - 200
13C2-4:2-FTS	96		50 - 200
13C2-6:2-FTS	106		50 - 200
13C2-8:2-FTS	108		50 - 200
13C3 PFHxS	110		50 - 200

**Lab Sample ID: 810-123429-1 DU**  
**Matrix: Drinking Water**  
**Analysis Batch: 118703**

**Client Sample ID: J18- Rehobeth ARV**  
**Prep Type: Total/NA**  
**Prep Batch: 118658**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	2.6		2.73		ng/L		4	30
Perfluoropentanoic acid (PFPeA)	5.9		6.07		ng/L		3	30
Perfluorohexanoic acid (PFHxA)	4.8		4.83		ng/L		0.8	30
Perfluoroheptanoic acid (PFHpA)	<1.9		<1.9		ng/L		NC	30
Perfluorooctanoic acid (PFOA)	2.7		2.64		ng/L		3	30
Perfluorononanoic acid (PFNA)	<1.9		<1.9		ng/L		NC	30
Perfluorodecanoic acid (PFDA)	<1.9		<1.9		ng/L		NC	30
Perfluoroundecanoic acid (PFUnA)	<1.9		<1.9		ng/L		NC	30
Perfluorododecanoic acid (PFDoA)	<1.9		<1.9		ng/L		NC	30
Perfluorobutanesulfonic acid (PFBS)	<1.9		<1.9		ng/L		NC	30
Perfluoropentanesulfonic acid (PFPeS)	<1.9		<1.9		ng/L		NC	30
Perfluorohexanesulfonic acid (PFHxS)	<1.9		<1.9		ng/L		NC	30

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# QC Sample Results

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

Job ID: 810-123429-1

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

**Lab Sample ID: 810-123429-1 DU**  
**Matrix: Drinking Water**  
**Analysis Batch: 118703**

**Client Sample ID: J18- Rehobeth ARV**  
**Prep Type: Total/NA**  
**Prep Batch: 118658**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Perfluoroheptanesulfonic acid (PFHpS)	<1.9		<1.9		ng/L		NC	30
Perfluorooctanesulfonic acid (PFOS)	2.9		2.82		ng/L		3	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<1.9		<1.9		ng/L		NC	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.9		<1.9		ng/L		NC	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<1.9		<1.9		ng/L		NC	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.9		<1.9		ng/L		NC	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.9		<1.9		ng/L		NC	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.9		<1.9		ng/L		NC	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<1.9		<1.9		ng/L		NC	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<1.9		<1.9		ng/L		NC	30
Perfluoro(4-methoxybutanoic acid)	<1.9		<1.9		ng/L		NC	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.9		<1.9		ng/L		NC	30
Perfluoro-3,6-dioxaheptanoic acid	<1.9		<1.9		ng/L		NC	30

Isotope Dilution	DU	DU	Limits
	%Recovery	Qualifier	
13C4 PFBA	105		50 - 200
13C5 PFPeA	136		50 - 200
13C5 PFHxA	105		50 - 200
13C4 PFHpA	98		50 - 200
13C8 PFOA	94		50 - 200
13C9 PFNA	91		50 - 200
13C6 PFDA	86		50 - 200
13C7 PFUnA	80		50 - 200
13C2 PFDoA	75		50 - 200
13C3 HFPO-DA	96		50 - 200
13C3 PFBS	110		50 - 200
13C8 PFOS	106		50 - 200
13C2-4:2-FTS	125		50 - 200
13C2-6:2-FTS	114		50 - 200
13C2-8:2-FTS	114		50 - 200
13C3 PFHxS	107		50 - 200

**Lab Sample ID: MBL 810-118673/1-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 118719**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 118673**

Analyte	MBL	MBL	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorobutanoic acid (PFBA)	<0.52		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1

Eurofins Eaton Analytical South Bend

# QC Sample Results

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

Job ID: 810-123429-1

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

**Lab Sample ID: MBL 810-118673/1-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 118719**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 118673**

Analyte	MBL Result	MBL Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<0.42		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
Perfluoroheptanoic acid (PFHpA)	<0.40		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
Perfluorononanoic acid (PFNA)	<0.38		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
Perfluorodecanoic acid (PFDA)	<0.36		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
Perfluoroundecanoic acid (PFUnA)	<0.38		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
Perfluorododecanoic acid (PFDoA)	<0.35		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
Perfluorobutanesulfonic acid (PFBS)	<0.42		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
Perfluoropentanesulfonic acid (PFPeS)	<0.37		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
Perfluorohexanesulfonic acid (PFHxS)	<0.39		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.44		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
Perfluorooctanesulfonic acid (PFOS)	<0.39		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.45		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.56		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.68		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.57		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.53		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.40		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<0.45		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<0.51		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
Perfluoro(4-methoxybutanoic acid)	<0.35		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.32		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1
Perfluoro-3,6-dioxaheptanoic acid	<0.93		2.0		ng/L		10/14/24 08:40	10/15/24 00:58	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	105		50 - 200	10/14/24 08:40	10/15/24 00:58	1
13C5 PFPeA	107		50 - 200	10/14/24 08:40	10/15/24 00:58	1
13C5 PFHxA	105		50 - 200	10/14/24 08:40	10/15/24 00:58	1
13C4 PFHpA	105		50 - 200	10/14/24 08:40	10/15/24 00:58	1
13C8 PFOA	105		50 - 200	10/14/24 08:40	10/15/24 00:58	1
13C9 PFNA	109		50 - 200	10/14/24 08:40	10/15/24 00:58	1
13C6 PFDA	108		50 - 200	10/14/24 08:40	10/15/24 00:58	1
13C7 PFUnA	109		50 - 200	10/14/24 08:40	10/15/24 00:58	1
13C2 PFDoA	109		50 - 200	10/14/24 08:40	10/15/24 00:58	1
13C3 HFPO-DA	103		50 - 200	10/14/24 08:40	10/15/24 00:58	1
13C3 PFBS	109		50 - 200	10/14/24 08:40	10/15/24 00:58	1
13C8 PFOS	109		50 - 200	10/14/24 08:40	10/15/24 00:58	1
13C2-4:2-FTS	94		50 - 200	10/14/24 08:40	10/15/24 00:58	1
13C2-6:2-FTS	100		50 - 200	10/14/24 08:40	10/15/24 00:58	1
13C2-8:2-FTS	108		50 - 200	10/14/24 08:40	10/15/24 00:58	1

Eurofins Eaton Analytical South Bend

# QC Sample Results

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

Job ID: 810-123429-1

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

**Lab Sample ID: MBL 810-118673/1-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 118719**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 118673**

<i>Isotope Dilution</i>	<i>MBL</i>	<i>MBL</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
	<i>%Recovery</i>	<i>Qualifier</i>				
13C3 PFHxS	108		50 - 200	10/14/24 08:40	10/15/24 00:58	1

**Lab Sample ID: LCS 810-118673/3-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 118719**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 118673**

<i>Analyte</i>	<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
Perfluorobutanoic acid (PFBA)	400	401		ng/L		100	70 - 130
Perfluoropentanoic acid (PFPeA)	400	395		ng/L		99	70 - 130
Perfluorohexanoic acid (PFHxA)	400	391		ng/L		98	70 - 130
Perfluoroheptanoic acid (PFHpA)	400	401		ng/L		100	70 - 130
Perfluorooctanoic acid (PFOA)	400	390		ng/L		97	70 - 130
Perfluorononanoic acid (PFNA)	400	393		ng/L		98	70 - 130
Perfluorodecanoic acid (PFDA)	400	392		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	400	396		ng/L		99	70 - 130
Perfluorododecanoic acid (PFDoA)	400	396		ng/L		99	70 - 130
Perfluorobutanesulfonic acid (PFBS)	355	353		ng/L		99	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	376	375		ng/L		100	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	365	364		ng/L		100	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	382	377		ng/L		99	70 - 130
Perfluorooctanesulfonic acid (PFOS)	371	370		ng/L		100	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	357	349		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	375	361		ng/L		96	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	381	368		ng/L		97	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	384	366		ng/L		95	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	400	385		ng/L		96	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	378	369		ng/L		98	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	374	372		ng/L		100	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	378	376		ng/L		99	70 - 130
Perfluoro(4-methoxybutanoic acid)	400	385		ng/L		96	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	400	393		ng/L		98	70 - 130
Perfluoro-3,6-dioxaheptanoic acid	400	395		ng/L		99	70 - 130

<i>Isotope Dilution</i>	<i>LCS</i>	<i>LCS</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
13C4 PFBA	100		50 - 200

# QC Sample Results

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

Job ID: 810-123429-1

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

**Lab Sample ID: LCS 810-118673/3-A**

**Matrix: Drinking Water**

**Analysis Batch: 118719**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 118673**

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C5 PFPeA	101		50 - 200
13C5 PFHxA	100		50 - 200
13C4 PFHpA	98		50 - 200
13C8 PFOA	103		50 - 200
13C9 PFNA	98		50 - 200
13C6 PFDA	98		50 - 200
13C7 PFUnA	99		50 - 200
13C2 PFDoA	100		50 - 200
13C3 HFPO-DA	102		50 - 200
13C3 PFBS	103		50 - 200
13C8 PFOS	106		50 - 200
13C2-4:2-FTS	117		50 - 200
13C2-6:2-FTS	121		50 - 200
13C2-8:2-FTS	114		50 - 200
13C3 PFHxS	103		50 - 200

**Lab Sample ID: LLCS 810-118673/2-A**

**Matrix: Drinking Water**

**Analysis Batch: 118719**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 118673**

Analyte	Spike Added	LLCS LLCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Perfluorobutanoic acid (PFBA)	2.00	1.74	J	ng/L		87	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	1.68	J	ng/L		84	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.66	J	ng/L		83	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	1.68	J	ng/L		84	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	1.62	J	ng/L		81	50 - 150
Perfluorononanoic acid (PFNA)	2.00	1.62	J	ng/L		81	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	1.70	J	ng/L		85	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	1.72	J	ng/L		86	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	1.68	J	ng/L		84	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.78	1.54	J	ng/L		87	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	1.88	1.45	J	ng/L		77	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.83	1.41	J	ng/L		77	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	1.91	1.56	J	ng/L		82	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.86	1.48	J	ng/L		80	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	1.78	1.68	J	ng/L		94	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.88	1.50	J	ng/L		80	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.90	1.80	J	ng/L		94	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.92	1.63	J	ng/L		85	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	2.00	1.70	J	ng/L		85	50 - 150

Eurofins Eaton Analytical South Bend

# QC Sample Results

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

Job ID: 810-123429-1

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

**Lab Sample ID: LLCS 810-118673/2-A**  
**Matrix: Drinking Water**  
**Analysis Batch: 118719**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 118673**

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.89	1.62	J	ng/L		86	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	1.87	1.43	J	ng/L		77	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	1.89	1.50	J	ng/L		79	50 - 150
Perfluoro(4-methoxybutanoic acid)	2.00	1.72	J	ng/L		86	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	1.70	J	ng/L		85	50 - 150
Perfluoro-3,6-dioxaheptanoic acid	2.00	1.62	J	ng/L		81	50 - 150

Isotope Dilution	LLCS LLCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	103		50 - 200
13C5 PFPeA	103		50 - 200
13C5 PFHxA	102		50 - 200
13C4 PFHpA	103		50 - 200
13C8 PFOA	103		50 - 200
13C9 PFNA	108		50 - 200
13C6 PFDA	105		50 - 200
13C7 PFUnA	105		50 - 200
13C2 PFDoA	106		50 - 200
13C3 HFPO-DA	99		50 - 200
13C3 PFBS	106		50 - 200
13C8 PFOS	106		50 - 200
13C2-4:2-FTS	94		50 - 200
13C2-6:2-FTS	101		50 - 200
13C2-8:2-FTS	108		50 - 200
13C3 PFHxS	106		50 - 200

**Lab Sample ID: 810-123429-2 MS**  
**Matrix: Drinking Water**  
**Analysis Batch: 118719**

**Client Sample ID: Y01- Yadkin Finished Water**  
**Prep Type: Total/NA**  
**Prep Batch: 118673**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
Perfluorobutanoic acid (PFBA)	2.3		191	190		ng/L		98	70 - 130
Perfluoropentanoic acid (PFPeA)	<1.9		191	188		ng/L		97	70 - 130
Perfluorohexanoic acid (PFHxA)	1.9		191	190		ng/L		98	70 - 130
Perfluoroheptanoic acid (PFHpA)	<1.9		191	188		ng/L		98	70 - 130
Perfluorooctanoic acid (PFOA)	<1.9		191	180		ng/L		94	70 - 130
Perfluorononanoic acid (PFNA)	<1.9		191	185		ng/L		97	70 - 130
Perfluorodecanoic acid (PFDA)	<1.9		191	188		ng/L		98	70 - 130
Perfluoroundecanoic acid (PFUnA)	<1.9		191	187		ng/L		98	70 - 130
Perfluorododecanoic acid (PFDoA)	<1.9		191	187		ng/L		98	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<1.9		170	169		ng/L		99	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<1.9		180	174		ng/L		97	70 - 130

Eurofins Eaton Analytical South Bend

# QC Sample Results

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

Job ID: 810-123429-1

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

Lab Sample ID: 810-123429-2 MS

Matrix: Drinking Water

Analysis Batch: 118719

Client Sample ID: Y01- Yadkin Finished Water

Prep Type: Total/NA

Prep Batch: 118673

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Perfluorohexanesulfonic acid (PFHxS)	<1.9		175	167		ng/L		95	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<1.9		182	173		ng/L		95	70 - 130
Perfluorooctanesulfonic acid (PFOS)	1.9		178	171		ng/L		95	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<1.9		171	136		ng/L		80	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.9		179	170		ng/L		95	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<1.9		182	172		ng/L		94	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.9		184	172		ng/L		94	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.9		191	186		ng/L		97	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.9		181	175		ng/L		97	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<1.9		179	182		ng/L		102	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<1.9		181	170		ng/L		94	70 - 130
Perfluoro(4-methoxybutanoic acid)	<1.9		191	186		ng/L		97	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.9		191	190		ng/L		99	70 - 130
Perfluoro-3,6-dioxaheptanoic acid	<1.9		191	184		ng/L		96	70 - 130

Isotope Dilution	MS	MS	Limits
	%Recovery	Qualifier	
13C4 PFBA	107		50 - 200
13C5 PFPeA	127		50 - 200
13C5 PFHxA	103		50 - 200
13C4 PFHpA	100		50 - 200
13C8 PFOA	99		50 - 200
13C9 PFNA	94		50 - 200
13C6 PFDA	90		50 - 200
13C7 PFUnA	87		50 - 200
13C2 PFDoA	83		50 - 200
13C3 HFPO-DA	101		50 - 200
13C3 PFBS	107		50 - 200
13C8 PFOS	108		50 - 200
13C2-4:2-FTS	131		50 - 200
13C2-6:2-FTS	115		50 - 200
13C2-8:2-FTS	115		50 - 200
13C3 PFHxS	106		50 - 200

# QC Association Summary

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

Job ID: 810-123429-1

## LCMS

### Prep Batch: 118658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-123429-1	J18- Rehobeth ARV	Total/NA	Drinking Water	533	
MBL 810-118658/1-A	Method Blank	Total/NA	Drinking Water	533	
LCS 810-118658/3-A	Lab Control Sample	Total/NA	Drinking Water	533	
LLCS 810-118658/2-A	Lab Control Sample	Total/NA	Drinking Water	533	
810-123429-1 DU	J18- Rehobeth ARV	Total/NA	Drinking Water	533	

### Prep Batch: 118673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-123429-2	Y01- Yadkin Finished Water	Total/NA	Drinking Water	533	
810-123429-3	Y02- Yadkin Raw Water	Total/NA	Drinking Water	533	
MBL 810-118673/1-A	Method Blank	Total/NA	Drinking Water	533	
LCS 810-118673/3-A	Lab Control Sample	Total/NA	Drinking Water	533	
LLCS 810-118673/2-A	Lab Control Sample	Total/NA	Drinking Water	533	
810-123429-2 MS	Y01- Yadkin Finished Water	Total/NA	Drinking Water	533	

### Analysis Batch: 118703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-123429-1	J18- Rehobeth ARV	Total/NA	Drinking Water	533	118658
MBL 810-118658/1-A	Method Blank	Total/NA	Drinking Water	533	118658
LCS 810-118658/3-A	Lab Control Sample	Total/NA	Drinking Water	533	118658
LLCS 810-118658/2-A	Lab Control Sample	Total/NA	Drinking Water	533	118658
810-123429-1 DU	J18- Rehobeth ARV	Total/NA	Drinking Water	533	118658

### Analysis Batch: 118719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-123429-2	Y01- Yadkin Finished Water	Total/NA	Drinking Water	533	118673
810-123429-3	Y02- Yadkin Raw Water	Total/NA	Drinking Water	533	118673
MBL 810-118673/1-A	Method Blank	Total/NA	Drinking Water	533	118673
LCS 810-118673/3-A	Lab Control Sample	Total/NA	Drinking Water	533	118673
LLCS 810-118673/2-A	Lab Control Sample	Total/NA	Drinking Water	533	118673
810-123429-2 MS	Y01- Yadkin Finished Water	Total/NA	Drinking Water	533	118673

# Lab Chronicle

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

Job ID: 810-123429-1

## Client Sample ID: J18- Rehobeth ARV

Lab Sample ID: 810-123429-1

Date Collected: 10/08/24 09:10

Matrix: Drinking Water

Date Received: 10/09/24 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			118658	MP	EA SB	10/14/24 07:20
Total/NA	Analysis	533		1	118703	MH	EA SB	10/14/24 19:49

## Client Sample ID: Y01- Yadkin Finished Water

Lab Sample ID: 810-123429-2

Date Collected: 10/08/24 10:20

Matrix: Drinking Water

Date Received: 10/09/24 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			118673	MP	EA SB	10/14/24 08:40
Total/NA	Analysis	533		1	118719	MH	EA SB	10/15/24 01:38

## Client Sample ID: Y02- Yadkin Raw Water

Lab Sample ID: 810-123429-3

Date Collected: 10/08/24 10:15

Matrix: Drinking Water

Date Received: 10/09/24 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			118673	MP	EA SB	10/14/24 08:40
Total/NA	Analysis	533		1	118719	MH	EA SB	10/15/24 05:14

**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: 810-123429-1

## 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	07-31-25

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	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)
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	Perfluorobutanesulfonic acid (PFBS)
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	Perfluorohexanesulfonic acid (PFHxS)
533	533	Drinking Water	Perfluorohexanoic acid (PFHxA)
533	533	Drinking Water	Perfluorononanoic acid (PFNA)
533	533	Drinking Water	Perfluorooctanesulfonic acid (PFOS)
533	533	Drinking Water	Perfluorooctanoic acid (PFOA)
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: 810-123429-1

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: 810-123429-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-123429-1	J18- Rehobeth ARV	Drinking Water	10/08/24 09:10	10/09/24 09:15
810-123429-2	Y01- Yadkin Finished Water	Drinking Water	10/08/24 10:20	10/09/24 09:15
810-123429-3	Y02- Yadkin Raw Water	Drinking Water	10/08/24 10:15	10/09/24 09:15

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# Chain of Custody Record

810-123429 Chain of Custody

Sampler: Justin Huntley  
 Client Contact: Justin Huntley  
 Phone: 704-291-0828  
 Lab PM: Mattheis, Joe  
 E-Mail: Joe.Mattheis@et.eurofins.com

Carrier Tracking No(s):  
 State of Origin:  
 Page: 1 of  
 Job #:

Union County  
 Address: 500 N Main St  
 City: Monroe  
 State, Zip: NC, 28112  
 Phone: 704-289-3307  
 PO #: 704-289-3307  
 WO #: Purchase order not required  
 Email: Justin.Huntley@unioncountync.gov  
 Project #: 81004979  
 PFAS-533  
 Site:

Due Date Requested:  
 TAT Requested (days):  
 Compliance Project:  Yes  No  
 Purchase order not required

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil/sediment, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Form MS/MSD (Yes or No)	533 - (MOD) Local method	Preservation Codes	Special Instructions/Note:
J18- Rehobeth ARV	10/8/24	9:10	G	Drinking Water			X		
Y01- Yadkin Finished Water	10/8/24	10:20	G	Drinking Water			X		
Y02- Yadkin Raw Water	10/8/24	10:15	G	Drinking Water			X		
									Initial Temp: 0.8 Corrected Temp: 0.8 IR Run #: 37

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For Months

Special Instructions/QC Requirements:

Received by: Justin Huntley  
 Date/Time: 10/8/24 10:30 am  
 Company: Eurofins

Relinquished by: Justin Huntley  
 Date/Time: 10/19/24 09:15  
 Company: Eurofins

Cooler Temperature(s) °C and Other Remarks:

## Login Sample Receipt Checklist

Client: Union County Water

Job Number: 810-123429-1

**Login Number: 123429**

**List Source: Eurofins Eaton Analytical South Bend**

**List Number: 1**

**Creator: Trowbridge, Peyton**

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.	True	
Cooler Temperature is acceptable.	True	
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	
Container provided by EEA	True	

