



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

810-130762-1

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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Authorized for release by
Joe Mattheis, Project Manager I
Joe.Mattheis@et.eurofinsus.com
(574)233-4777



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Definitions/Glossary

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

Job ID: 810-130762-1

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: 810-130762-1

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Job Narrative 810-130762-1

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 12/9/2024 12:00 PM. 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 (810-130762-1), Y01 Yadkin Finished Water (810-130762-2) and Y02 Yadkin Raw Water (810-130762-3)

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: 810-130762-1

Client Sample ID: J18 Rehobeth ARV

Lab Sample ID: 810-130762-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	4.0		2.0		ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	6.6		2.0		ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	5.9		2.0		ng/L	1		533	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.1		2.0		ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	3.6		2.0		ng/L	1		533	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.1		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.1		2.0		ng/L	1		533	Total/NA

Client Sample ID: Y01 Yadkin Finished Water

Lab Sample ID: 810-130762-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.4		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: 810-130762-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	2.8		1.9		ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	2.9		1.9		ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	2.3		1.9		ng/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	2.4		1.9		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.3		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: 810-130762-1

Client Sample ID: J18 Rehobeth ARV

Lab Sample ID: 810-130762-1

Date Collected: 12/05/24 09:38

Matrix: Drinking Water

Date Received: 12/09/24 12:00

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)	4.0		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
Perfluoropentanoic acid (PFPeA)	6.6		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
Perfluorohexanoic acid (PFHxA)	5.9		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
Perfluoroheptanoic acid (PFHpA)	2.1		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
Perfluorooctanoic acid (PFOA)	3.6		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
Perfluorobutanesulfonic acid (PFBS)	2.1		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
Perfluorooctanesulfonic acid (PFOS)	3.1		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<2.0		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<2.0		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
Perfluoro(4-methoxybutanoic acid)	<2.0		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1
Perfluoro-3,6-dioxaheptanoic acid	<2.0		2.0		ng/L		12/11/24 08:57	12/12/24 17:37	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	89		50 - 200	12/11/24 08:57	12/12/24 17:37	1
13C5 PFPeA	104		50 - 200	12/11/24 08:57	12/12/24 17:37	1
13C5 PFHxA	83		50 - 200	12/11/24 08:57	12/12/24 17:37	1
13C4 PFHpA	82		50 - 200	12/11/24 08:57	12/12/24 17:37	1
13C8 PFOA	82		50 - 200	12/11/24 08:57	12/12/24 17:37	1
13C9 PFNA	81		50 - 200	12/11/24 08:57	12/12/24 17:37	1
13C6 PFDA	81		50 - 200	12/11/24 08:57	12/12/24 17:37	1
13C7 PFUnA	84		50 - 200	12/11/24 08:57	12/12/24 17:37	1
13C2 PFDoA	83		50 - 200	12/11/24 08:57	12/12/24 17:37	1
13C3 HFPO-DA	79		50 - 200	12/11/24 08:57	12/12/24 17:37	1
13C3 PFBS	86		50 - 200	12/11/24 08:57	12/12/24 17:37	1
13C8 PFOS	90		50 - 200	12/11/24 08:57	12/12/24 17:37	1
13C2-4:2-FTS	101		50 - 200	12/11/24 08:57	12/12/24 17:37	1

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Client Sample Results

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

Job ID: 810-130762-1

Client Sample ID: J18 Rehobeth ARV

Lab Sample ID: 810-130762-1

Date Collected: 12/05/24 09:38

Matrix: Drinking Water

Date Received: 12/09/24 12:00

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-6:2-FTS	95		50 - 200	12/11/24 08:57	12/12/24 17:37	1
13C2-8:2-FTS	101		50 - 200	12/11/24 08:57	12/12/24 17:37	1
13C3 PFHxS	88		50 - 200	12/11/24 08:57	12/12/24 17:37	1

Client Sample ID: Y01 Yadkin Finished Water

Lab Sample ID: 810-130762-2

Date Collected: 12/05/24 10:45

Matrix: Drinking Water

Date Received: 12/09/24 12:00

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)	2.4		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
Perfluoropentanoic acid (PFPeA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
Perfluorohexanoic acid (PFHxA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
Perfluoroheptanoic acid (PFHpA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
Perfluorooctanoic acid (PFOA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
Perfluorononanoic acid (PFNA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
Perfluorodecanoic acid (PFDA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
Perfluorobutanesulfonic acid (PFBS)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
Perfluoropentanesulfonic acid (PFPeS)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
Perfluorohexanesulfonic acid (PFHxS)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
Perfluorooctanesulfonic acid (PFOS)	1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
Perfluoro(4-methoxybutanoic acid)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
Perfluoro-3,6-dioxaheptanoic acid	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 18:58	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	89		50 - 200				12/11/24 08:57	12/12/24 18:58	1
13C5 PFPeA	103		50 - 200				12/11/24 08:57	12/12/24 18:58	1
13C5 PFHxA	80		50 - 200				12/11/24 08:57	12/12/24 18:58	1
13C4 PFHpA	78		50 - 200				12/11/24 08:57	12/12/24 18:58	1
13C8 PFOA	77		50 - 200				12/11/24 08:57	12/12/24 18:58	1

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Client Sample Results

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

Job ID: 810-130762-1

Client Sample ID: Y01 Yadkin Finished Water

Lab Sample ID: 810-130762-2

Date Collected: 12/05/24 10:45

Matrix: Drinking Water

Date Received: 12/09/24 12:00

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C9 PFNA	77		50 - 200	12/11/24 08:57	12/12/24 18:58	1
13C6 PFDA	76		50 - 200	12/11/24 08:57	12/12/24 18:58	1
13C7 PFUnA	78		50 - 200	12/11/24 08:57	12/12/24 18:58	1
13C2 PFDoA	79		50 - 200	12/11/24 08:57	12/12/24 18:58	1
13C3 HFPO-DA	76		50 - 200	12/11/24 08:57	12/12/24 18:58	1
13C3 PFBS	88		50 - 200	12/11/24 08:57	12/12/24 18:58	1
13C8 PFOS	90		50 - 200	12/11/24 08:57	12/12/24 18:58	1
13C2-4:2-FTS	92		50 - 200	12/11/24 08:57	12/12/24 18:58	1
13C2-6:2-FTS	93		50 - 200	12/11/24 08:57	12/12/24 18:58	1
13C2-8:2-FTS	104		50 - 200	12/11/24 08:57	12/12/24 18:58	1
13C3 PFHxS	88		50 - 200	12/11/24 08:57	12/12/24 18:58	1

Client Sample ID: Y02 Yadkin Raw Water

Lab Sample ID: 810-130762-3

Date Collected: 12/05/24 10:44

Matrix: Drinking Water

Date Received: 12/09/24 12:00

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)	2.8		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
Perfluoropentanoic acid (PFPeA)	2.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
Perfluorohexanoic acid (PFHxA)	2.3		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
Perfluoroheptanoic acid (PFHpA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
Perfluorooctanoic acid (PFOA)	2.4		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
Perfluorononanoic acid (PFNA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
Perfluorodecanoic acid (PFDA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
Perfluorobutanesulfonic acid (PFBS)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
Perfluoropentanesulfonic acid (PFPeS)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
Perfluorohexanesulfonic acid (PFHxS)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
Perfluorooctanesulfonic acid (PFOS)	4.3		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
Perfluoro(4-methoxybutanoic acid)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1

Eurofins Eaton Analytical South Bend

Client Sample Results

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

Job ID: 810-130762-1

Client Sample ID: Y02 Yadkin Raw Water

Lab Sample ID: 810-130762-3

Date Collected: 12/05/24 10:44

Matrix: Drinking Water

Date Received: 12/09/24 12:00

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-methoxypropanoic acid (PFMPA)	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
Perfluoro-3,6-dioxaheptanoic acid	<1.9		1.9		ng/L		12/11/24 08:57	12/12/24 19:11	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	88		50 - 200				12/11/24 08:57	12/12/24 19:11	1
13C5 PFPeA	120		50 - 200				12/11/24 08:57	12/12/24 19:11	1
13C5 PFHxA	83		50 - 200				12/11/24 08:57	12/12/24 19:11	1
13C4 PFHpA	80		50 - 200				12/11/24 08:57	12/12/24 19:11	1
13C8 PFOA	78		50 - 200				12/11/24 08:57	12/12/24 19:11	1
13C9 PFNA	72		50 - 200				12/11/24 08:57	12/12/24 19:11	1
13C6 PFDA	66		50 - 200				12/11/24 08:57	12/12/24 19:11	1
13C7 PFUnA	67		50 - 200				12/11/24 08:57	12/12/24 19:11	1
13C2 PFDoA	73		50 - 200				12/11/24 08:57	12/12/24 19:11	1
13C3 HFPO-DA	78		50 - 200				12/11/24 08:57	12/12/24 19:11	1
13C3 PFBS	87		50 - 200				12/11/24 08:57	12/12/24 19:11	1
13C8 PFOS	90		50 - 200				12/11/24 08:57	12/12/24 19:11	1
13C2-4:2-FTS	107		50 - 200				12/11/24 08:57	12/12/24 19:11	1
13C2-6:2-FTS	93		50 - 200				12/11/24 08:57	12/12/24 19:11	1
13C2-8:2-FTS	101		50 - 200				12/11/24 08:57	12/12/24 19:11	1
13C3 PFHxS	88		50 - 200				12/11/24 08:57	12/12/24 19:11	1

Isotope Dilution Summary

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

Job ID: 810-130762-1

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)
810-130762-1	J18 Rehobeth ARV	89	104	83	82	82	81	81	84
810-130762-1 DU	J18 Rehobeth ARV	90	106	82	82	84	84	83	85
810-130762-2	Y01 Yadkin Finished Water	89	103	80	78	77	77	76	78
810-130762-3	Y02 Yadkin Raw Water	88	120	83	80	78	72	66	67
LCS 810-126100/3-A	Lab Control Sample	89	88	84	84	88	87	86	86
LLCS 810-126100/2-A	Lab Control Sample	94	94	93	93	92	96	96	93
MBL 810-126100/1-A	Method Blank	91	88	89	91	92	96	93	95

		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)
810-130762-1	J18 Rehobeth ARV	83	79	86	90	101	95	101	88
810-130762-1 DU	J18 Rehobeth ARV	84	79	89	89	100	95	102	89
810-130762-2	Y01 Yadkin Finished Water	79	76	88	90	92	93	104	88
810-130762-3	Y02 Yadkin Raw Water	73	78	87	90	107	93	101	88
LCS 810-126100/3-A	Lab Control Sample	87	83	89	89	89	99	94	88
LLCS 810-126100/2-A	Lab Control Sample	95	87	94	94	90	95	102	94
MBL 810-126100/1-A	Method Blank	94	86	93	93	86	94	98	92

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: 810-130762-1

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

Lab Sample ID: MBL 810-126100/1-A
Matrix: Drinking Water
Analysis Batch: 126192

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 126100

Analyte	MBL Result	MBL Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.52		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
Perfluorohexanoic acid (PFHxA)	<0.42		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
Perfluoroheptanoic acid (PFHpA)	<0.40		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
Perfluorononanoic acid (PFNA)	<0.38		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
Perfluorodecanoic acid (PFDA)	<0.36		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
Perfluoroundecanoic acid (PFUnA)	<0.38		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
Perfluorododecanoic acid (PFDoA)	<0.35		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
Perfluorobutanesulfonic acid (PFBS)	<0.42		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
Perfluoropentanesulfonic acid (PFPeS)	<0.37		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
Perfluorohexanesulfonic acid (PFHxS)	<0.39		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.44		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
Perfluorooctanesulfonic acid (PFOS)	<0.39		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.45		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.56		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.68		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.57		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.53		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.40		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<0.45		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<0.51		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
Perfluoro(4-methoxybutanoic acid)	<0.35		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.32		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1
Perfluoro-3,6-dioxaheptanoic acid	<0.93		2.0		ng/L		12/11/24 08:57	12/12/24 16:30	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	91		50 - 200	12/11/24 08:57	12/12/24 16:30	1
13C5 PFPeA	88		50 - 200	12/11/24 08:57	12/12/24 16:30	1
13C5 PFHxA	89		50 - 200	12/11/24 08:57	12/12/24 16:30	1
13C4 PFHpA	91		50 - 200	12/11/24 08:57	12/12/24 16:30	1
13C8 PFOA	92		50 - 200	12/11/24 08:57	12/12/24 16:30	1
13C9 PFNA	96		50 - 200	12/11/24 08:57	12/12/24 16:30	1
13C6 PFDA	93		50 - 200	12/11/24 08:57	12/12/24 16:30	1
13C7 PFUnA	95		50 - 200	12/11/24 08:57	12/12/24 16:30	1
13C2 PFDoA	94		50 - 200	12/11/24 08:57	12/12/24 16:30	1
13C3 HFPO-DA	86		50 - 200	12/11/24 08:57	12/12/24 16:30	1
13C3 PFBS	93		50 - 200	12/11/24 08:57	12/12/24 16:30	1
13C8 PFOS	93		50 - 200	12/11/24 08:57	12/12/24 16:30	1
13C2-4:2-FTS	86		50 - 200	12/11/24 08:57	12/12/24 16:30	1

Eurofins Eaton Analytical South Bend

QC Sample Results

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

Job ID: 810-130762-1

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

Lab Sample ID: MBL 810-126100/1-A
Matrix: Drinking Water
Analysis Batch: 126192

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 126100

Isotope Dilution	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C2-6:2-FTS	94		50 - 200	12/11/24 08:57	12/12/24 16:30	1
13C2-8:2-FTS	98		50 - 200	12/11/24 08:57	12/12/24 16:30	1
13C3 PFHxS	92		50 - 200	12/11/24 08:57	12/12/24 16:30	1

Lab Sample ID: LCS 810-126100/3-A
Matrix: Drinking Water
Analysis Batch: 126192

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 126100

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanoic acid (PFPeA)	200	207		ng/L		103	70 - 130
Perfluorohexanoic acid (PFHxA)	200	202		ng/L		101	70 - 130
Perfluoroheptanoic acid (PFHpA)	200	206		ng/L		103	70 - 130
Perfluorooctanoic acid (PFOA)	200	200		ng/L		100	70 - 130
Perfluorononanoic acid (PFNA)	200	198		ng/L		99	70 - 130
Perfluorodecanoic acid (PFDA)	200	209		ng/L		104	70 - 130
Perfluoroundecanoic acid (PFUnA)	200	209		ng/L		105	70 - 130
Perfluorododecanoic acid (PFDoA)	200	203		ng/L		102	70 - 130
Perfluorobutanesulfonic acid (PFBS)	178	179		ng/L		101	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	188	190		ng/L		101	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	183	183		ng/L		100	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	191	188		ng/L		99	70 - 130
Perfluorooctanesulfonic acid (PFOS)	186	185		ng/L		99	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	178	178		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	188	189		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	190	192		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	192	195		ng/L		101	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	200	203		ng/L		101	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	189	195		ng/L		103	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	187	185		ng/L		99	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	189	190		ng/L		101	70 - 130
Perfluoro(4-methoxybutanoic acid)	200	204		ng/L		102	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	200	200		ng/L		100	70 - 130
Perfluoro-3,6-dioxaheptanoic acid	200	196		ng/L		98	70 - 130

QC Sample Results

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

Job ID: 810-130762-1

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

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	89		50 - 200
13C5 PFPeA	88		50 - 200
13C5 PFHxA	84		50 - 200
13C4 PFHpA	84		50 - 200
13C8 PFOA	88		50 - 200
13C9 PFNA	87		50 - 200
13C6 PFDA	86		50 - 200
13C7 PFUnA	86		50 - 200
13C2 PFDoA	87		50 - 200
13C3 HFPO-DA	83		50 - 200
13C3 PFBS	89		50 - 200
13C8 PFOS	89		50 - 200
13C2-4:2-FTS	89		50 - 200
13C2-6:2-FTS	99		50 - 200
13C2-8:2-FTS	94		50 - 200
13C3 PFHxS	88		50 - 200

Lab Sample ID: LLCS 810-126100/2-A

Matrix: Drinking Water

Analysis Batch: 126192

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 126100

Analyte	Spike Added	LLCS	LLCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Perfluorobutanoic acid (PFBA)	2.00	1.94	J	ng/L		97	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	1.92	J	ng/L		96	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.94	J	ng/L		97	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	1.97	J	ng/L		98	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	1.99	J	ng/L		99	50 - 150
Perfluorononanoic acid (PFNA)	2.00	1.95	J	ng/L		98	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.03		ng/L		102	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.07		ng/L		104	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.09		ng/L		105	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.78	1.69	J	ng/L		95	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	1.88	1.72	J	ng/L		91	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.83	1.71	J	ng/L		94	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	1.91	1.72	J	ng/L		90	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.86	1.84	J	ng/L		99	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	1.78	1.75	J	ng/L		98	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.88	1.80	J	ng/L		96	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.90	1.98	J	ng/L		104	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.92	1.89	J	ng/L		99	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	2.00	1.99	J	ng/L		100	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.89	1.85	J	ng/L		98	50 - 150

Eurofins Eaton Analytical South Bend

QC Sample Results

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

Job ID: 810-130762-1

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

Lab Sample ID: LLCS 810-126100/2-A
Matrix: Drinking Water
Analysis Batch: 126192

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 126100

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	1.87	1.73	J	ng/L		92	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	1.89	1.81	J	ng/L		96	50 - 150
Perfluoro(4-methoxybutanoic acid)	2.00	1.84	J	ng/L		92	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	1.96	J	ng/L		98	50 - 150
Perfluoro-3,6-dioxaheptanoic acid	2.00	1.88	J	ng/L		94	50 - 150

Isotope Dilution	LLCS LLCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	94		50 - 200
13C5 PFPeA	94		50 - 200
13C5 PFHxA	93		50 - 200
13C4 PFHpA	93		50 - 200
13C8 PFOA	92		50 - 200
13C9 PFNA	96		50 - 200
13C6 PFDA	96		50 - 200
13C7 PFUnA	93		50 - 200
13C2 PFDoA	95		50 - 200
13C3 HFPO-DA	87		50 - 200
13C3 PFBS	94		50 - 200
13C8 PFOS	94		50 - 200
13C2-4:2-FTS	90		50 - 200
13C2-6:2-FTS	95		50 - 200
13C2-8:2-FTS	102		50 - 200
13C3 PFHxS	94		50 - 200

Lab Sample ID: 810-130762-1 DU
Matrix: Drinking Water
Analysis Batch: 126192

Client Sample ID: J18 Rehobeth ARV
Prep Type: Total/NA
Prep Batch: 126100

Analyte	Sample Result	Sample Qualifier	DU DU		Unit	D	RPD	
			Result	Qualifier			RPD	Limit
Perfluorobutanoic acid (PFBA)	4.0		3.39		ng/L		16	30
Perfluoropentanoic acid (PFPeA)	6.6		6.58		ng/L		0.9	30
Perfluorohexanoic acid (PFHxA)	5.9		5.83		ng/L		2	30
Perfluoroheptanoic acid (PFHpA)	2.1		2.03		ng/L		2	30
Perfluorooctanoic acid (PFOA)	3.6		3.58		ng/L		1	30
Perfluorononanoic acid (PFNA)	<2.0		<1.9		ng/L		NC	30
Perfluorodecanoic acid (PFDA)	<2.0		<1.9		ng/L		NC	30
Perfluoroundecanoic acid (PFUnA)	<2.0		<1.9		ng/L		NC	30
Perfluorododecanoic acid (PFDoA)	<2.0		<1.9		ng/L		NC	30
Perfluorobutanesulfonic acid (PFBS)	2.1		2.09		ng/L		2	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		<1.9		ng/L		NC	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		<1.9		ng/L		NC	30

Eurofins Eaton Analytical South Bend

QC Sample Results

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

Job ID: 810-130762-1

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

Lab Sample ID: 810-130762-1 DU
Matrix: Drinking Water
Analysis Batch: 126192

Client Sample ID: J18 Rehobeth ARV
Prep Type: Total/NA
Prep Batch: 126100

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		<1.9		ng/L		NC	30
Perfluorooctanesulfonic acid (PFOS)	3.1		3.23		ng/L		4	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		<1.9		ng/L		NC	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		<1.9		ng/L		NC	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		<1.9		ng/L		NC	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		<1.9		ng/L		NC	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		<1.9		ng/L		NC	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		<1.9		ng/L		NC	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<2.0		<1.9		ng/L		NC	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<2.0		<1.9		ng/L		NC	30
Perfluoro(4-methoxybutanoic acid)	<2.0		<1.9		ng/L		NC	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		<1.9		ng/L		NC	30
Perfluoro-3,6-dioxaheptanoic acid	<2.0		<1.9		ng/L		NC	30

Isotope Dilution	DU	DU	Limits
	%Recovery	Qualifier	
13C4 PFBA	90		50 - 200
13C5 PFPeA	106		50 - 200
13C5 PFHxA	82		50 - 200
13C4 PFHpA	82		50 - 200
13C8 PFOA	84		50 - 200
13C9 PFNA	84		50 - 200
13C6 PFDA	83		50 - 200
13C7 PFUnA	85		50 - 200
13C2 PFDoA	84		50 - 200
13C3 HFPO-DA	79		50 - 200
13C3 PFBS	89		50 - 200
13C8 PFOS	89		50 - 200
13C2-4:2-FTS	100		50 - 200
13C2-6:2-FTS	95		50 - 200
13C2-8:2-FTS	102		50 - 200
13C3 PFHxS	89		50 - 200

QC Association Summary

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

Job ID: 810-130762-1

LCMS

Prep Batch: 126100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-130762-1	J18 Rehobeth ARV	Total/NA	Drinking Water	533	
810-130762-2	Y01 Yadkin Finished Water	Total/NA	Drinking Water	533	
810-130762-3	Y02 Yadkin Raw Water	Total/NA	Drinking Water	533	
MBL 810-126100/1-A	Method Blank	Total/NA	Drinking Water	533	
LCS 810-126100/3-A	Lab Control Sample	Total/NA	Drinking Water	533	
LLCS 810-126100/2-A	Lab Control Sample	Total/NA	Drinking Water	533	
810-130762-1 DU	J18 Rehobeth ARV	Total/NA	Drinking Water	533	

Analysis Batch: 126192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-130762-1	J18 Rehobeth ARV	Total/NA	Drinking Water	533	126100
810-130762-2	Y01 Yadkin Finished Water	Total/NA	Drinking Water	533	126100
810-130762-3	Y02 Yadkin Raw Water	Total/NA	Drinking Water	533	126100
MBL 810-126100/1-A	Method Blank	Total/NA	Drinking Water	533	126100
LCS 810-126100/3-A	Lab Control Sample	Total/NA	Drinking Water	533	126100
LLCS 810-126100/2-A	Lab Control Sample	Total/NA	Drinking Water	533	126100
810-130762-1 DU	J18 Rehobeth ARV	Total/NA	Drinking Water	533	126100



Lab Chronicle

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

Job ID: 810-130762-1

Client Sample ID: J18 Rehobeth ARV

Lab Sample ID: 810-130762-1

Date Collected: 12/05/24 09:38

Matrix: Drinking Water

Date Received: 12/09/24 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			126100	KB	EA SB	12/11/24 08:57
Total/NA	Analysis	533		1	126192	BS	EA SB	12/12/24 17:37

Client Sample ID: Y01 Yadkin Finished Water

Lab Sample ID: 810-130762-2

Date Collected: 12/05/24 10:45

Matrix: Drinking Water

Date Received: 12/09/24 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			126100	KB	EA SB	12/11/24 08:57
Total/NA	Analysis	533		1	126192	BS	EA SB	12/12/24 18:58

Client Sample ID: Y02 Yadkin Raw Water

Lab Sample ID: 810-130762-3

Date Collected: 12/05/24 10:44

Matrix: Drinking Water

Date Received: 12/09/24 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			126100	KB	EA SB	12/11/24 08:57
Total/NA	Analysis	533		1	126192	BS	EA SB	12/12/24 19:11

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: 810-130762-1

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: 810-130762-1

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: 810-130762-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-130762-1	J18 Rehobeth ARV	Drinking Water	12/05/24 09:38	12/09/24 12:00
810-130762-2	Y01 Yadkin Finished Water	Drinking Water	12/05/24 10:45	12/09/24 12:00
810-130762-3	Y02 Yadkin Raw Water	Drinking Water	12/05/24 10:44	12/09/24 12:00

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Chain of Custody Record

C 810-130762 Chain of Custody
 Cite: Justin Huntley
 Company: Union County Water
 Address: 500 N Main St.
 City: Monroe
 State, Zip: NC, 28112
 Phone: 704-289-3307 (Tel)
 Email: Justin.Huntley@UnionCountyNC.gov
 Project Name: PFAS - 533
 Site:

Sampler: **Deryl Ennis**
 Phone: **704-506-9683**
 Lab PM: **Mattheis, Joe**
 E-Mail: **Joe.Mattheis@et.eurofinsus.com**
 Carrier Tracking No(s):
 State of Origin:
 Job #:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Preservation Code	Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Form MS/MSD (Yes or No)	533 - (MOD) Local Method	Total Number of Containers	Special Instructions/Note:
J18- Rehobeth ARV	12/5/24	0938	G		drinking Water	✓			3	
Y01- Yadkin Finished Water	12/5/24	1045	G		drinking Water	✓			3	
Y02- Yadkin Raw Water	12/5/24	1044	G		drinking Water	✓				Initial Temp: 0.4 Corrected Temp: R Gun # <i>Sp 04000</i>

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
Deliverable Requested: I, II, III, IV, Other (specify)

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:

Empty Kit Relinquished by: _____ Date: _____
Relinquished by: *Deryl Ennis (FedEx)* Date/Time: 12-5-24 12:15 Company: UCUW
Relinquished by: *Joe Mattheis* Date/Time: 12/09/2024 12:00 Company: _____
Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No **Custody Seal No.:** _____
Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: Union County Water

Job Number: 810-130762-1

Login Number: 130762

List Source: Eurofins Eaton Analytical South Bend

List Number: 1

Creator: Moffitt, Heather

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	

