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ANALYTICAL REPORT

PREPARED FOR

Attn: Junior Honeycutt
Union County Water
500 N Main St.
Monroe, North Carolina 28112

Generated 6/4/2023 9:10:07 PM

JOB DESCRIPTION

Union County Water NC0190413 UCMR5

JOB NUMBER

810-59137-1

Eurofins Eaton Analytical South Bend

Job Notes

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

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: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

Qualifiers

Metals

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.
α	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/Site: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

Job ID: 810-59137-1

Laboratory: Eurofins Eaton Analytical South Bend

Narrative

Job Narrative
810-59137-1

Receipt

The samples were received on 4/11/2023 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

PFAS

Method 533_UCMR5: The following QC issues in 810-57378 OR 810-57437 were observed: (CCV 810-57437/24) failed high for Nonfluoro-3,6-dioxaheptanoic acid (NFDHA) (145%). Limit 70-130%. This analyte was not detected in any sample bracketed by this CCV. Results are not affected and may be reported.

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

Metals

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: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

Client Sample ID: Anson County Water Intertie

Lab Sample ID: 810-59137-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.0065		0.0047	ug/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	0.0028		0.0028	ug/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	0.0039		0.0037	ug/L	1		533	Total/NA

Client Sample ID: Anson County Water Intertie

Lab Sample ID: 810-59137-1FRB

No Detections.

Client Sample ID: Catawba River WTP

Lab Sample ID: 810-59137-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	0.0062		0.0028	ug/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	0.0062		0.0028	ug/L	1		533	Total/NA
Perfluorooctanoic acid (PFOA)	0.0037		0.0037	ug/L	1		533	Total/NA

Client Sample ID: Catawba River WTP

Lab Sample ID: 810-59137-2FRB

No Detections.

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Union County Water
 Project/Site: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

Client Sample ID: Anson County Water Intertie

Lab Sample ID: 810-59137-1

Date Collected: 04/10/23 11:05

Matrix: Drinking Water

Date Received: 04/11/23 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.0065		0.0047	ug/L		05/02/23 06:41	05/03/23 15:42	1
Perfluoropentanoic acid (PFPeA)	0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:42	1
Perfluorohexanoic acid (PFHxA)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:42	1
Perfluoroheptanoic acid (PFHpA)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:42	1
Perfluorooctanoic acid (PFOA)	<0.0037		0.0037	ug/L		05/02/23 06:41	05/03/23 15:42	1
Perfluorononanoic acid (PFNA)	<0.0037		0.0037	ug/L		05/02/23 06:41	05/03/23 15:42	1
Perfluorodecanoic acid (PFDA)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:42	1
Perfluoroundecanoic acid (PFUnA)	<0.0019		0.0019	ug/L		05/02/23 06:41	05/03/23 15:42	1
Perfluorododecanoic acid (PFDoA)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:42	1
Perfluorobutanesulfonic acid (PFBS)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:42	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:42	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:42	1
Perfluorooctanesulfonic acid (PFOS)	0.0039		0.0037	ug/L		05/02/23 06:41	05/03/23 15:42	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0037		0.0037	ug/L		05/02/23 06:41	05/03/23 15:42	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0047		0.0047	ug/L		05/02/23 06:41	05/03/23 15:42	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<0.0019		0.0019	ug/L		05/02/23 06:41	05/03/23 15:42	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<0.0047		0.0047	ug/L		05/02/23 06:41	05/03/23 15:42	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:42	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0047		0.0047	ug/L		05/02/23 06:41	05/03/23 15:42	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0047		0.0047	ug/L		05/02/23 06:41	05/03/23 15:42	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0187		0.0187	ug/L		05/02/23 06:41	05/03/23 15:42	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0037		0.0037	ug/L		05/02/23 06:41	05/03/23 15:42	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:42	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:42	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	86		50 - 200	05/02/23 06:41	05/03/23 15:42	1
13C4 PFBA	78		50 - 200	05/02/23 06:41	05/03/23 15:42	1
13C3 PFBS	82		50 - 200	05/02/23 06:41	05/03/23 15:42	1
13C5 PFPeA	93		50 - 200	05/02/23 06:41	05/03/23 15:42	1
13C5 PFHxA	76		50 - 200	05/02/23 06:41	05/03/23 15:42	1
13C4 PFHpA	77		50 - 200	05/02/23 06:41	05/03/23 15:42	1
13C8 PFOA	74		50 - 200	05/02/23 06:41	05/03/23 15:42	1
13C9 PFNA	67		50 - 200	05/02/23 06:41	05/03/23 15:42	1
13C6 PFDA	58		50 - 200	05/02/23 06:41	05/03/23 15:42	1
13C7 PFUnA	54		50 - 200	05/02/23 06:41	05/03/23 15:42	1
13C2 PFDoA	58		50 - 200	05/02/23 06:41	05/03/23 15:42	1
13C8 PFOS	77		50 - 200	05/02/23 06:41	05/03/23 15:42	1
13C3 PFHxS	80		50 - 200	05/02/23 06:41	05/03/23 15:42	1

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Client Sample Results

Client: Union County Water
 Project/Site: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

Client Sample ID: Anson County Water Intertie

Lab Sample ID: 810-59137-1

Date Collected: 04/10/23 11:05

Matrix: Drinking Water

Date Received: 04/11/23 09:30

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-4:2-FTS	99		50 - 200	05/02/23 06:41	05/03/23 15:42	1
13C2-6:2-FTS	89		50 - 200	05/02/23 06:41	05/03/23 15:42	1
13C2-8:2-FTS	85		50 - 200	05/02/23 06:41	05/03/23 15:42	1

Method: EPA 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	<0.0047		0.0047	ug/L		04/19/23 05:36	04/20/23 23:13	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0057		0.0057	ug/L		04/19/23 05:36	04/20/23 23:13	1
Perfluorotetradecanoic acid (PFTA)	<0.0076		0.0076	ug/L		04/19/23 05:36	04/20/23 23:13	1
Perfluorotridecanoic acid (PFTrDA)	<0.0066		0.0066	ug/L		04/19/23 05:36	04/20/23 23:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	96		70 - 130	04/19/23 05:36	04/20/23 23:13	1
13C2 PFHxA	88		70 - 130	04/19/23 05:36	04/20/23 23:13	1
13C2 PFDA	97		70 - 130	04/19/23 05:36	04/20/23 23:13	1
13C3 HFPO-DA	90		70 - 130	04/19/23 05:36	04/20/23 23:13	1

Method: EPA 200.7 UCMR5 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<9.00		9.00	ug/L		04/16/23 10:29	04/18/23 19:30	1

Client Sample ID: Anson County Water Intertie

Lab Sample ID: 810-59137-1FRB

Date Collected: 04/10/23 11:01

Matrix: Drinking Water

Date Received: 04/11/23 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0005		0.0046	ug/L		05/08/23 07:04	05/09/23 02:05	1
Perfluoropentanoic acid (PFPeA)	<0.0003		0.0027	ug/L		05/08/23 07:04	05/09/23 02:05	1
Perfluorohexanoic acid (PFHxA)	<0.0004		0.0027	ug/L		05/08/23 07:04	05/09/23 02:05	1
Perfluoroheptanoic acid (PFHpA)	<0.0004		0.0027	ug/L		05/08/23 07:04	05/09/23 02:05	1
Perfluorooctanoic acid (PFOA)	<0.0003		0.0037	ug/L		05/08/23 07:04	05/09/23 02:05	1
Perfluorononanoic acid (PFNA)	<0.0003		0.0037	ug/L		05/08/23 07:04	05/09/23 02:05	1
Perfluorodecanoic acid (PFDA)	<0.0003		0.0027	ug/L		05/08/23 07:04	05/09/23 02:05	1
Perfluoroundecanoic acid (PFUnA)	<0.0003		0.0018	ug/L		05/08/23 07:04	05/09/23 02:05	1
Perfluorododecanoic acid (PFDoA)	<0.0003		0.0027	ug/L		05/08/23 07:04	05/09/23 02:05	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0004		0.0027	ug/L		05/08/23 07:04	05/09/23 02:05	1
Perfluorobutanesulfonic acid (PFBS)	<0.0004		0.0027	ug/L		05/08/23 07:04	05/09/23 02:05	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0004		0.0027	ug/L		05/08/23 07:04	05/09/23 02:05	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0004		0.0027	ug/L		05/08/23 07:04	05/09/23 02:05	1
Perfluorooctanesulfonic acid (PFOS)	<0.0004		0.0037	ug/L		05/08/23 07:04	05/09/23 02:05	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0003		0.0037	ug/L		05/08/23 07:04	05/09/23 02:05	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0005		0.0046	ug/L		05/08/23 07:04	05/09/23 02:05	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0004		0.0018	ug/L		05/08/23 07:04	05/09/23 02:05	1
11-Chloroeicosafluoro-3-oxadecane-1-sulfonic acid	<0.0005		0.0046	ug/L		05/08/23 07:04	05/09/23 02:05	1

Eurofins Eaton Analytical South Bend

Client Sample Results

Client: Union County Water
 Project/Site: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

Client Sample ID: Anson County Water Intertie

Lab Sample ID: 810-59137-1FRB

Date Collected: 04/10/23 11:01

Matrix: Drinking Water

Date Received: 04/11/23 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0005		0.0027	ug/L		05/08/23 07:04	05/09/23 02:05	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0006		0.0046	ug/L		05/08/23 07:04	05/09/23 02:05	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0005		0.0046	ug/L		05/08/23 07:04	05/09/23 02:05	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0009		0.0183	ug/L		05/08/23 07:04	05/09/23 02:05	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0003		0.0037	ug/L		05/08/23 07:04	05/09/23 02:05	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0003		0.0027	ug/L		05/08/23 07:04	05/09/23 02:05	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0004		0.0027	ug/L		05/08/23 07:04	05/09/23 02:05	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	84		50 - 200			05/08/23 07:04	05/09/23 02:05	1
13C4 PFBA	100		50 - 200			05/08/23 07:04	05/09/23 02:05	1
13C3 PFBS	99		50 - 200			05/08/23 07:04	05/09/23 02:05	1
13C5 PFPeA	94		50 - 200			05/08/23 07:04	05/09/23 02:05	1
13C5 PFHxA	99		50 - 200			05/08/23 07:04	05/09/23 02:05	1
13C4 PFHpA	100		50 - 200			05/08/23 07:04	05/09/23 02:05	1
13C8 PFOA	99		50 - 200			05/08/23 07:04	05/09/23 02:05	1
13C9 PFNA	101		50 - 200			05/08/23 07:04	05/09/23 02:05	1
13C6 PFDA	101		50 - 200			05/08/23 07:04	05/09/23 02:05	1
13C7 PFUnA	97		50 - 200			05/08/23 07:04	05/09/23 02:05	1
13C2 PFDoA	95		50 - 200			05/08/23 07:04	05/09/23 02:05	1
13C8 PFOS	98		50 - 200			05/08/23 07:04	05/09/23 02:05	1
13C3 PFHxS	98		50 - 200			05/08/23 07:04	05/09/23 02:05	1
13C2-4:2-FTS	108		50 - 200			05/08/23 07:04	05/09/23 02:05	1
13C2-6:2-FTS	103		50 - 200			05/08/23 07:04	05/09/23 02:05	1
13C2-8:2-FTS	102		50 - 200			05/08/23 07:04	05/09/23 02:05	1

Client Sample ID: Catawba River WTP

Lab Sample ID: 810-59137-2

Date Collected: 04/10/23 09:59

Matrix: Drinking Water

Date Received: 04/11/23 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0047		0.0047	ug/L		05/02/23 06:41	05/03/23 15:29	1
Perfluoropentanoic acid (PFPeA)	0.0062		0.0028	ug/L		05/02/23 06:41	05/03/23 15:29	1
Perfluorohexanoic acid (PFHxA)	0.0062		0.0028	ug/L		05/02/23 06:41	05/03/23 15:29	1
Perfluoroheptanoic acid (PFHpA)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:29	1
Perfluorooctanoic acid (PFOA)	0.0037		0.0037	ug/L		05/02/23 06:41	05/03/23 15:29	1
Perfluorononanoic acid (PFNA)	<0.0037		0.0037	ug/L		05/02/23 06:41	05/03/23 15:29	1
Perfluorodecanoic acid (PFDA)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:29	1
Perfluoroundecanoic acid (PFUnA)	<0.0019		0.0019	ug/L		05/02/23 06:41	05/03/23 15:29	1
Perfluorododecanoic acid (PFDoA)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:29	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:29	1
Perfluorobutanesulfonic acid (PFBS)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:29	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:29	1

Eurofins Eaton Analytical South Bend

Client Sample Results

Client: Union County Water
 Project/Site: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

Client Sample ID: Catawba River WTP

Lab Sample ID: 810-59137-2

Date Collected: 04/10/23 09:59

Matrix: Drinking Water

Date Received: 04/11/23 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid (PFHpS)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:29	1
Perfluorooctanesulfonic acid (PFOS)	<0.0037		0.0037	ug/L		05/02/23 06:41	05/03/23 15:29	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0037		0.0037	ug/L		05/02/23 06:41	05/03/23 15:29	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0047		0.0047	ug/L		05/02/23 06:41	05/03/23 15:29	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<0.0019		0.0019	ug/L		05/02/23 06:41	05/03/23 15:29	1
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid	<0.0047		0.0047	ug/L		05/02/23 06:41	05/03/23 15:29	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:29	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0047		0.0047	ug/L		05/02/23 06:41	05/03/23 15:29	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0047		0.0047	ug/L		05/02/23 06:41	05/03/23 15:29	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0187		0.0187	ug/L		05/02/23 06:41	05/03/23 15:29	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0037		0.0037	ug/L		05/02/23 06:41	05/03/23 15:29	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:29	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.0028		0.0028	ug/L		05/02/23 06:41	05/03/23 15:29	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	84		50 - 200	05/02/23 06:41	05/03/23 15:29	1
13C4 PFBA	80		50 - 200	05/02/23 06:41	05/03/23 15:29	1
13C3 PFBS	85		50 - 200	05/02/23 06:41	05/03/23 15:29	1
13C5 PFPeA	97		50 - 200	05/02/23 06:41	05/03/23 15:29	1
13C5 PFHxA	78		50 - 200	05/02/23 06:41	05/03/23 15:29	1
13C4 PFHpA	78		50 - 200	05/02/23 06:41	05/03/23 15:29	1
13C8 PFOA	72		50 - 200	05/02/23 06:41	05/03/23 15:29	1
13C9 PFNA	65		50 - 200	05/02/23 06:41	05/03/23 15:29	1
13C6 PFDA	57		50 - 200	05/02/23 06:41	05/03/23 15:29	1
13C7 PFUnA	54		50 - 200	05/02/23 06:41	05/03/23 15:29	1
13C2 PFDoA	56		50 - 200	05/02/23 06:41	05/03/23 15:29	1
13C8 PFOS	79		50 - 200	05/02/23 06:41	05/03/23 15:29	1
13C3 PFHxS	82		50 - 200	05/02/23 06:41	05/03/23 15:29	1
13C2-4:2-FTS	96		50 - 200	05/02/23 06:41	05/03/23 15:29	1
13C2-6:2-FTS	86		50 - 200	05/02/23 06:41	05/03/23 15:29	1
13C2-8:2-FTS	83		50 - 200	05/02/23 06:41	05/03/23 15:29	1

Method: EPA 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0050		0.0050	ug/L		04/19/23 05:36	04/20/23 23:24	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0060		0.0060	ug/L		04/19/23 05:36	04/20/23 23:24	1
Perfluorotetradecanoic acid (PFTA)	<0.0080		0.0080	ug/L		04/19/23 05:36	04/20/23 23:24	1
Perfluorotridecanoic acid (PFTrDA)	<0.0070		0.0070	ug/L		04/19/23 05:36	04/20/23 23:24	1

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Client Sample Results

Client: Union County Water
 Project/Site: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

Client Sample ID: Catawba River WTP

Lab Sample ID: 810-59137-2

Date Collected: 04/10/23 09:59

Matrix: Drinking Water

Date Received: 04/11/23 09:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	91		70 - 130	04/19/23 05:36	04/20/23 23:24	1
13C2 PFHxA	95		70 - 130	04/19/23 05:36	04/20/23 23:24	1
13C2 PFDA	96		70 - 130	04/19/23 05:36	04/20/23 23:24	1
13C3 HFPO-DA	97		70 - 130	04/19/23 05:36	04/20/23 23:24	1

Method: EPA 200.7 UCMR5 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<9.00		9.00	ug/L		04/16/23 10:29	04/18/23 19:32	1

Client Sample ID: Catawba River WTP

Lab Sample ID: 810-59137-2FRB

Date Collected: 04/10/23 09:55

Matrix: Drinking Water

Date Received: 04/11/23 09:30

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0005		0.0046	ug/L		05/08/23 07:04	05/09/23 02:19	1
Perfluoropentanoic acid (PFPeA)	<0.0004		0.0028	ug/L		05/08/23 07:04	05/09/23 02:19	1
Perfluorohexanoic acid (PFHxA)	<0.0004		0.0028	ug/L		05/08/23 07:04	05/09/23 02:19	1
Perfluoroheptanoic acid (PFHpA)	<0.0004		0.0028	ug/L		05/08/23 07:04	05/09/23 02:19	1
Perfluorooctanoic acid (PFOA)	<0.0004		0.0037	ug/L		05/08/23 07:04	05/09/23 02:19	1
Perfluorononanoic acid (PFNA)	<0.0004		0.0037	ug/L		05/08/23 07:04	05/09/23 02:19	1
Perfluorodecanoic acid (PFDA)	<0.0003		0.0028	ug/L		05/08/23 07:04	05/09/23 02:19	1
Perfluoroundecanoic acid (PFUnA)	<0.0004		0.0018	ug/L		05/08/23 07:04	05/09/23 02:19	1
Perfluorododecanoic acid (PFDoA)	<0.0003		0.0028	ug/L		05/08/23 07:04	05/09/23 02:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0004		0.0028	ug/L		05/08/23 07:04	05/09/23 02:19	1
Perfluorobutanesulfonic acid (PFBS)	<0.0004		0.0028	ug/L		05/08/23 07:04	05/09/23 02:19	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0004		0.0028	ug/L		05/08/23 07:04	05/09/23 02:19	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0004		0.0028	ug/L		05/08/23 07:04	05/09/23 02:19	1
Perfluorooctanesulfonic acid (PFOS)	<0.0004		0.0037	ug/L		05/08/23 07:04	05/09/23 02:19	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0003		0.0037	ug/L		05/08/23 07:04	05/09/23 02:19	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0005		0.0046	ug/L		05/08/23 07:04	05/09/23 02:19	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<0.0004		0.0018	ug/L		05/08/23 07:04	05/09/23 02:19	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<0.0005		0.0046	ug/L		05/08/23 07:04	05/09/23 02:19	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0005		0.0028	ug/L		05/08/23 07:04	05/09/23 02:19	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0006		0.0046	ug/L		05/08/23 07:04	05/09/23 02:19	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0005		0.0046	ug/L		05/08/23 07:04	05/09/23 02:19	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0009		0.0185	ug/L		05/08/23 07:04	05/09/23 02:19	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0003		0.0037	ug/L		05/08/23 07:04	05/09/23 02:19	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0003		0.0028	ug/L		05/08/23 07:04	05/09/23 02:19	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.0004		0.0028	ug/L		05/08/23 07:04	05/09/23 02:19	1

Eurofins Eaton Analytical South Bend

Client Sample Results

Client: Union County Water
 Project/Site: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

Client Sample ID: Catawba River WTP

Lab Sample ID: 810-59137-2FRB

Date Collected: 04/10/23 09:55

Matrix: Drinking Water

Date Received: 04/11/23 09:30

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	86		50 - 200	05/08/23 07:04	05/09/23 02:19	1
13C4 PFBA	95		50 - 200	05/08/23 07:04	05/09/23 02:19	1
13C3 PFBS	93		50 - 200	05/08/23 07:04	05/09/23 02:19	1
13C5 PFPeA	91		50 - 200	05/08/23 07:04	05/09/23 02:19	1
13C5 PFHxA	95		50 - 200	05/08/23 07:04	05/09/23 02:19	1
13C4 PFHpA	96		50 - 200	05/08/23 07:04	05/09/23 02:19	1
13C8 PFOA	94		50 - 200	05/08/23 07:04	05/09/23 02:19	1
13C9 PFNA	97		50 - 200	05/08/23 07:04	05/09/23 02:19	1
13C6 PFDA	97		50 - 200	05/08/23 07:04	05/09/23 02:19	1
13C7 PFUnA	94		50 - 200	05/08/23 07:04	05/09/23 02:19	1
13C2 PFDoA	94		50 - 200	05/08/23 07:04	05/09/23 02:19	1
13C8 PFOS	94		50 - 200	05/08/23 07:04	05/09/23 02:19	1
13C3 PFHxS	94		50 - 200	05/08/23 07:04	05/09/23 02:19	1
13C2-4:2-FTS	100		50 - 200	05/08/23 07:04	05/09/23 02:19	1
13C2-6:2-FTS	93		50 - 200	05/08/23 07:04	05/09/23 02:19	1
13C2-8:2-FTS	95		50 - 200	05/08/23 07:04	05/09/23 02:19	1

Surrogate Summary

Client: Union County Water
 Project/Site: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

Method: 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	HFPODA (70-130)
810-59137-1	Anson County Water Intertie	96	88	97	90
810-59137-2	Catawba River WTP	91	95	96	97
LLCS 810-55902/2-A	Lab Control Sample	98	83	103	85
MBL 810-55902/1-A	Method Blank	92	88	93	89

Surrogate Legend

- d5NEFOS = d5-NEtFOSAA
- PFHxA = 13C2 PFHxA
- PFDA = 13C2 PFDA
- HFPODA = 13C3 HFPO-DA



Isotope Dilution Summary

Client: Union County Water
 Project/Site: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

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	HFPODA (50-200)	PFBA (50-200)	C3PFBS (50-200)	PFPeA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)
810-59137-1	Anson County Water Intertie	86	78	82	93	76	77	74	67
810-59137-1FRB	FRB	84	100	99	94	99	100	99	101
810-59137-2	Catawba River WTP	84	80	85	97	78	78	72	65
810-59137-2FRB	FRB	86	95	93	91	95	96	94	97
LLCS 810-57378/2-A	Lab Control Sample	78	83	87	79	82	83	82	81
LLCS 810-58075/2-A	Lab Control Sample	93	95	100	93	99	98	99	100
MBL 810-57378/1-A	Method Blank	78	89	91	84	84	86	86	85
MBL 810-58075/1-A	Method Blank	89	101	103	97	101	102	101	102

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	C6PFDA (50-200)	13C7PUA (50-200)	PFDoA (50-200)	C8PFOS (50-200)	C3PFHS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
810-59137-1	Anson County Water Intertie	58	54	58	77	80	99	89	85
810-59137-1FRB	FRB	101	97	95	98	98	108	103	102
810-59137-2	Catawba River WTP	57	54	56	79	82	96	86	83
810-59137-2FRB	FRB	97	94	94	94	94	100	93	95
LLCS 810-57378/2-A	Lab Control Sample	80	77	76	79	83	84	81	81
LLCS 810-58075/2-A	Lab Control Sample	97	96	95	98	99	101	99	99
MBL 810-57378/1-A	Method Blank	74	65	61	78	86	90	90	77
MBL 810-58075/1-A	Method Blank	100	99	97	100	103	104	102	103

Surrogate Legend

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

QC Sample Results

Client: Union County Water
 Project/Site: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

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

Lab Sample ID: MBL 810-57378/1-A
Matrix: Drinking Water
Analysis Batch: 57437

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57378

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0005		0.0050	ug/L		05/02/23 06:41	05/03/23 13:40	1
Perfluoropentanoic acid (PFPeA)	<0.0004		0.0030	ug/L		05/02/23 06:41	05/03/23 13:40	1
Perfluorohexanoic acid (PFHxA)	<0.0004		0.0030	ug/L		05/02/23 06:41	05/03/23 13:40	1
Perfluoroheptanoic acid (PFHpA)	<0.0004		0.0030	ug/L		05/02/23 06:41	05/03/23 13:40	1
Perfluorooctanoic acid (PFOA)	<0.0004		0.0040	ug/L		05/02/23 06:41	05/03/23 13:40	1
Perfluorononanoic acid (PFNA)	<0.0004		0.0040	ug/L		05/02/23 06:41	05/03/23 13:40	1
Perfluorodecanoic acid (PFDA)	<0.0004		0.0030	ug/L		05/02/23 06:41	05/03/23 13:40	1
Perfluoroundecanoic acid (PFUnA)	<0.0004		0.0020	ug/L		05/02/23 06:41	05/03/23 13:40	1
Perfluorododecanoic acid (PFDoA)	<0.0004		0.0030	ug/L		05/02/23 06:41	05/03/23 13:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0004		0.0030	ug/L		05/02/23 06:41	05/03/23 13:40	1
Perfluorobutanesulfonic acid (PFBS)	<0.0004		0.0030	ug/L		05/02/23 06:41	05/03/23 13:40	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0004		0.0030	ug/L		05/02/23 06:41	05/03/23 13:40	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0004		0.0030	ug/L		05/02/23 06:41	05/03/23 13:40	1
Perfluorooctanesulfonic acid (PFOS)	<0.0004		0.0040	ug/L		05/02/23 06:41	05/03/23 13:40	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0004		0.0040	ug/L		05/02/23 06:41	05/03/23 13:40	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0005		0.0050	ug/L		05/02/23 06:41	05/03/23 13:40	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<0.0005		0.0020	ug/L		05/02/23 06:41	05/03/23 13:40	1
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid	<0.0005		0.0050	ug/L		05/02/23 06:41	05/03/23 13:40	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0006		0.0030	ug/L		05/02/23 06:41	05/03/23 13:40	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0007		0.0050	ug/L		05/02/23 06:41	05/03/23 13:40	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0006		0.0050	ug/L		05/02/23 06:41	05/03/23 13:40	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0009		0.0200	ug/L		05/02/23 06:41	05/03/23 13:40	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0003		0.0040	ug/L		05/02/23 06:41	05/03/23 13:40	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0004		0.0030	ug/L		05/02/23 06:41	05/03/23 13:40	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.0005		0.0030	ug/L		05/02/23 06:41	05/03/23 13:40	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	78		50 - 200	05/02/23 06:41	05/03/23 13:40	1
13C4 PFBA	89		50 - 200	05/02/23 06:41	05/03/23 13:40	1
13C3 PFBS	91		50 - 200	05/02/23 06:41	05/03/23 13:40	1
13C5 PFPeA	84		50 - 200	05/02/23 06:41	05/03/23 13:40	1
13C5 PFHxA	84		50 - 200	05/02/23 06:41	05/03/23 13:40	1
13C4 PFHpA	86		50 - 200	05/02/23 06:41	05/03/23 13:40	1
13C8 PFOA	86		50 - 200	05/02/23 06:41	05/03/23 13:40	1
13C9 PFNA	85		50 - 200	05/02/23 06:41	05/03/23 13:40	1
13C6 PFDA	74		50 - 200	05/02/23 06:41	05/03/23 13:40	1
13C7 PFUnA	65		50 - 200	05/02/23 06:41	05/03/23 13:40	1
13C2 PFDoA	61		50 - 200	05/02/23 06:41	05/03/23 13:40	1
13C8 PFOS	78		50 - 200	05/02/23 06:41	05/03/23 13:40	1

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QC Sample Results

Client: Union County Water
 Project/Site: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

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

Lab Sample ID: MBL 810-57378/1-A
Matrix: Drinking Water
Analysis Batch: 57437

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 57378

Isotope Dilution	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C3 PFHxS	86		50 - 200	05/02/23 06:41	05/03/23 13:40	1
13C2-4:2-FTS	90		50 - 200	05/02/23 06:41	05/03/23 13:40	1
13C2-6:2-FTS	90		50 - 200	05/02/23 06:41	05/03/23 13:40	1
13C2-8:2-FTS	77		50 - 200	05/02/23 06:41	05/03/23 13:40	1

Lab Sample ID: LLCS 810-57378/2-A
Matrix: Drinking Water
Analysis Batch: 57437

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 57378

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanoic acid (PFPeA)	0.00200	0.0020		ug/L		102	50 - 150
Perfluorohexanoic acid (PFHxA)	0.00200	0.0020		ug/L		98	50 - 150
Perfluoroheptanoic acid (PFHpA)	0.00200	0.0019		ug/L		96	50 - 150
Perfluorooctanoic acid (PFOA)	0.00200	0.0020		ug/L		99	50 - 150
Perfluorononanoic acid (PFNA)	0.00200	0.0020		ug/L		98	50 - 150
Perfluorodecanoic acid (PFDA)	0.00200	0.0020		ug/L		100	50 - 150
Perfluoroundecanoic acid (PFUnA)	0.00200	0.0021		ug/L		104	50 - 150
Perfluorododecanoic acid (PFDoA)	0.00200	0.0021		ug/L		103	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.00189	0.0018		ug/L		95	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.00178	0.0016		ug/L		90	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.00183	0.0017		ug/L		95	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	0.00191	0.0018		ug/L		96	50 - 150
Perfluorooctanesulfonic acid (PFOS)	0.00186	0.0019		ug/L		100	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.00188	0.0018		ug/L		95	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.00200	0.0017		ug/L		85	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.00187	0.0019		ug/L		99	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.00189	0.0019		ug/L		99	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.00188	0.0020		ug/L		108	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.00190	0.0021		ug/L		109	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.00192	0.0021		ug/L		109	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.00200	0.0023		ug/L		116	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.00200	0.0018		ug/L		90	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.00200	0.0018		ug/L		92	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	0.00178	0.0016		ug/L		90	50 - 150

QC Sample Results

Client: Union County Water
 Project/Site: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

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

Isotope Dilution	LLCS LLCS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	78		50 - 200
13C4 PFBA	83		50 - 200
13C3 PFBS	87		50 - 200
13C5 PFPeA	79		50 - 200
13C5 PFHxA	82		50 - 200
13C4 PFHpA	83		50 - 200
13C8 PFOA	82		50 - 200
13C9 PFNA	81		50 - 200
13C6 PFDA	80		50 - 200
13C7 PFUnA	77		50 - 200
13C2 PFDoA	76		50 - 200
13C8 PFOS	79		50 - 200
13C3 PFHxS	83		50 - 200
13C2-4:2-FTS	84		50 - 200
13C2-6:2-FTS	81		50 - 200
13C2-8:2-FTS	81		50 - 200

Lab Sample ID: MBL 810-58075/1-A
Matrix: Drinking Water
Analysis Batch: 58150

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58075

Analyte	MBL	MBL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Perfluorobutanoic acid (PFBA)	<0.0005		0.0050	ug/L		05/08/23 07:04	05/08/23 20:27	1
Perfluoropentanoic acid (PFPeA)	<0.0004		0.0030	ug/L		05/08/23 07:04	05/08/23 20:27	1
Perfluorohexanoic acid (PFHxA)	<0.0004		0.0030	ug/L		05/08/23 07:04	05/08/23 20:27	1
Perfluoroheptanoic acid (PFHpA)	<0.0004		0.0030	ug/L		05/08/23 07:04	05/08/23 20:27	1
Perfluorooctanoic acid (PFOA)	<0.0004		0.0040	ug/L		05/08/23 07:04	05/08/23 20:27	1
Perfluorononanoic acid (PFNA)	<0.0004		0.0040	ug/L		05/08/23 07:04	05/08/23 20:27	1
Perfluorodecanoic acid (PFDA)	<0.0004		0.0030	ug/L		05/08/23 07:04	05/08/23 20:27	1
Perfluoroundecanoic acid (PFUnA)	<0.0004		0.0020	ug/L		05/08/23 07:04	05/08/23 20:27	1
Perfluorododecanoic acid (PFDoA)	<0.0004		0.0030	ug/L		05/08/23 07:04	05/08/23 20:27	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0004		0.0030	ug/L		05/08/23 07:04	05/08/23 20:27	1
Perfluorobutanesulfonic acid (PFBS)	<0.0004		0.0030	ug/L		05/08/23 07:04	05/08/23 20:27	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0004		0.0030	ug/L		05/08/23 07:04	05/08/23 20:27	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0004		0.0030	ug/L		05/08/23 07:04	05/08/23 20:27	1
Perfluorooctanesulfonic acid (PFOS)	<0.0004		0.0040	ug/L		05/08/23 07:04	05/08/23 20:27	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0004		0.0040	ug/L		05/08/23 07:04	05/08/23 20:27	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0005		0.0050	ug/L		05/08/23 07:04	05/08/23 20:27	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0005		0.0020	ug/L		05/08/23 07:04	05/08/23 20:27	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0005		0.0050	ug/L		05/08/23 07:04	05/08/23 20:27	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0006		0.0030	ug/L		05/08/23 07:04	05/08/23 20:27	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0007		0.0050	ug/L		05/08/23 07:04	05/08/23 20:27	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0006		0.0050	ug/L		05/08/23 07:04	05/08/23 20:27	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0009		0.0200	ug/L		05/08/23 07:04	05/08/23 20:27	1

Eurofins Eaton Analytical South Bend

QC Sample Results

Client: Union County Water
 Project/Site: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

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

Lab Sample ID: MBL 810-58075/1-A
Matrix: Drinking Water
Analysis Batch: 58150

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58075

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0003		0.0040	ug/L		05/08/23 07:04	05/08/23 20:27	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0004		0.0030	ug/L		05/08/23 07:04	05/08/23 20:27	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.0005		0.0030	ug/L		05/08/23 07:04	05/08/23 20:27	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	89		50 - 200	05/08/23 07:04	05/08/23 20:27	1
13C4 PFBA	101		50 - 200	05/08/23 07:04	05/08/23 20:27	1
13C3 PFBS	103		50 - 200	05/08/23 07:04	05/08/23 20:27	1
13C5 PFPeA	97		50 - 200	05/08/23 07:04	05/08/23 20:27	1
13C5 PFHxA	101		50 - 200	05/08/23 07:04	05/08/23 20:27	1
13C4 PFHpA	102		50 - 200	05/08/23 07:04	05/08/23 20:27	1
13C8 PFOA	101		50 - 200	05/08/23 07:04	05/08/23 20:27	1
13C9 PFNA	102		50 - 200	05/08/23 07:04	05/08/23 20:27	1
13C6 PFDA	100		50 - 200	05/08/23 07:04	05/08/23 20:27	1
13C7 PFUnA	99		50 - 200	05/08/23 07:04	05/08/23 20:27	1
13C2 PFDoA	97		50 - 200	05/08/23 07:04	05/08/23 20:27	1
13C8 PFOS	100		50 - 200	05/08/23 07:04	05/08/23 20:27	1
13C3 PFHxS	103		50 - 200	05/08/23 07:04	05/08/23 20:27	1
13C2-4:2-FTS	104		50 - 200	05/08/23 07:04	05/08/23 20:27	1
13C2-6:2-FTS	102		50 - 200	05/08/23 07:04	05/08/23 20:27	1
13C2-8:2-FTS	103		50 - 200	05/08/23 07:04	05/08/23 20:27	1

Lab Sample ID: LLCS 810-58075/2-A
Matrix: Drinking Water
Analysis Batch: 58150

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58075

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	0.00200	0.0021		ug/L		103	50 - 150
Perfluoropentanoic acid (PFPeA)	0.00200	0.0018		ug/L		92	50 - 150
Perfluorohexanoic acid (PFHxA)	0.00200	0.0018		ug/L		91	50 - 150
Perfluoroheptanoic acid (PFHpA)	0.00200	0.0018		ug/L		92	50 - 150
Perfluorooctanoic acid (PFOA)	0.00200	0.0018		ug/L		91	50 - 150
Perfluorononanoic acid (PFNA)	0.00200	0.0018		ug/L		91	50 - 150
Perfluorodecanoic acid (PFDA)	0.00200	0.0018		ug/L		90	50 - 150
Perfluoroundecanoic acid (PFUnA)	0.00200	0.0018		ug/L		92	50 - 150
Perfluorododecanoic acid (PFDoA)	0.00200	0.0020		ug/L		101	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.00189	0.0017		ug/L		90	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.00178	0.0016		ug/L		90	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.00183	0.0016		ug/L		90	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	0.00191	0.0017		ug/L		91	50 - 150
Perfluorooctanesulfonic acid (PFOS)	0.00186	0.0016		ug/L		88	50 - 150

Eurofins Eaton Analytical South Bend

QC Sample Results

Client: Union County Water
 Project/Site: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

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

Lab Sample ID: LLCS 810-58075/2-A
Matrix: Drinking Water
Analysis Batch: 58150

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58075

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanesulfonic acid (PFPeS)	0.00188	0.0017		ug/L		92	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.00200	0.0014		ug/L		71	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.00187	0.0017		ug/L		91	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.00189	0.0015		ug/L		80	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.00188	0.0019		ug/L		103	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.00190	0.0018		ug/L		95	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.00192	0.0018		ug/L		95	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.00200	0.0012		ug/L		60	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.00200	0.0017		ug/L		87	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.00200	0.0018		ug/L		90	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	0.00178	0.0016		ug/L		90	50 - 150

Isotope Dilution	LLCS %Recovery	LLCS Qualifier	LLCS Limits
13C3 HFPO-DA	93		50 - 200
13C4 PFBA	95		50 - 200
13C3 PFBS	100		50 - 200
13C5 PFPeA	93		50 - 200
13C5 PFHxA	99		50 - 200
13C4 PFHpA	98		50 - 200
13C8 PFOA	99		50 - 200
13C9 PFNA	100		50 - 200
13C6 PFDA	97		50 - 200
13C7 PFUnA	96		50 - 200
13C2 PFDoA	95		50 - 200
13C8 PFOS	98		50 - 200
13C3 PFHxS	99		50 - 200
13C2-4:2-FTS	101		50 - 200
13C2-6:2-FTS	99		50 - 200
13C2-8:2-FTS	99		50 - 200

Method: 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS)

Lab Sample ID: MBL 810-55902/1-A
Matrix: Drinking Water
Analysis Batch: 56000

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 55902

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	<0.0005		0.0050	ug/L		04/19/23 05:36	04/20/23 20:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0006		0.0060	ug/L		04/19/23 05:36	04/20/23 20:14	1

Eurofins Eaton Analytical South Bend

QC Sample Results

Client: Union County Water
 Project/Site: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

Method: 537.1 UCMR5 - Perfluorinated Alkyl Acids (LC/MS) (Continued)

Lab Sample ID: MBL 810-55902/1-A
Matrix: Drinking Water
Analysis Batch: 56000

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 55902

Analyte	MBL	MBL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Perfluorotetradecanoic acid (PFTA)	<0.0007		0.0080	ug/L		04/19/23 05:36	04/20/23 20:14	1
Perfluorotridecanoic acid (PFTTrDA)	<0.0006		0.0070	ug/L		04/19/23 05:36	04/20/23 20:14	1

Surrogate	MBL	MBL	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
d5-NEtFOSAA	92		70 - 130	04/19/23 05:36	04/20/23 20:14	1
13C2 PFHxA	88		70 - 130	04/19/23 05:36	04/20/23 20:14	1
13C2 PFDA	93		70 - 130	04/19/23 05:36	04/20/23 20:14	1
13C3 HFPO-DA	89		70 - 130	04/19/23 05:36	04/20/23 20:14	1

Lab Sample ID: LLCS 810-55902/2-A
Matrix: Drinking Water
Analysis Batch: 56000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55902

Analyte	Spike Added	LLCS	LLCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
N-ethylperfluorooctanesulfonami doacetic acid (NEtFOSAA)	0.00200	0.0023		ug/L		117	50 - 150
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	0.00200	0.0021		ug/L		105	50 - 150
Perfluorotetradecanoic acid (PFTA)	0.00200	0.0019		ug/L		93	50 - 150
Perfluorotridecanoic acid (PFTTrDA)	0.00200	0.0020		ug/L		98	50 - 150

Surrogate	LLCS	LLCS	Limits
	%Recovery	Qualifier	
d5-NEtFOSAA	98		70 - 130
13C2 PFHxA	83		70 - 130
13C2 PFDA	103		70 - 130
13C3 HFPO-DA	85		70 - 130

Method: 200.7 UCMR5 - Metals (ICP)

Lab Sample ID: MBL 810-55464/1-A
Matrix: Drinking Water
Analysis Batch: 55869

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 55464

Analyte	MBL	MBL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Lithium	<0.520		9.00	ug/L		04/16/23 10:29	04/18/23 18:45	1

Lab Sample ID: LLCS 810-55464/2-A
Matrix: Drinking Water
Analysis Batch: 55869

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55464

Analyte	Spike Added	LLCS	LLCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Lithium	9.00	8.89	J	ug/L		99	50 - 150

QC Association Summary

Client: Union County Water
 Project/Site: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

LCMS

Prep Batch: 55902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-59137-1	Anson County Water Intertie	Total/NA	Drinking Water	537.1 DW	
810-59137-2	Catawba River WTP	Total/NA	Drinking Water	537.1 DW	
MBL 810-55902/1-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LLCS 810-55902/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 56000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-59137-1	Anson County Water Intertie	Total/NA	Drinking Water	537.1 UCMR5	55902
810-59137-2	Catawba River WTP	Total/NA	Drinking Water	537.1 UCMR5	55902
MBL 810-55902/1-A	Method Blank	Total/NA	Drinking Water	537.1 UCMR5	55902
LLCS 810-55902/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 UCMR5	55902

Prep Batch: 57378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-59137-1	Anson County Water Intertie	Total/NA	Drinking Water	533	
810-59137-2	Catawba River WTP	Total/NA	Drinking Water	533	
MBL 810-57378/1-A	Method Blank	Total/NA	Drinking Water	533	
LLCS 810-57378/2-A	Lab Control Sample	Total/NA	Drinking Water	533	

Analysis Batch: 57437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-59137-1	Anson County Water Intertie	Total/NA	Drinking Water	533	57378
810-59137-2	Catawba River WTP	Total/NA	Drinking Water	533	57378
MBL 810-57378/1-A	Method Blank	Total/NA	Drinking Water	533	57378
LLCS 810-57378/2-A	Lab Control Sample	Total/NA	Drinking Water	533	57378

Prep Batch: 58075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-59137-1FRB	FRB	Total/NA	Drinking Water	533	
810-59137-2FRB	FRB	Total/NA	Drinking Water	533	
MBL 810-58075/1-A	Method Blank	Total/NA	Drinking Water	533	
LLCS 810-58075/2-A	Lab Control Sample	Total/NA	Drinking Water	533	

Analysis Batch: 58150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-59137-1FRB	FRB	Total/NA	Drinking Water	533	58075
810-59137-2FRB	FRB	Total/NA	Drinking Water	533	58075
MBL 810-58075/1-A	Method Blank	Total/NA	Drinking Water	533	58075
LLCS 810-58075/2-A	Lab Control Sample	Total/NA	Drinking Water	533	58075

Metals

Prep Batch: 55464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-59137-1	Anson County Water Intertie	Total/NA	Drinking Water	200.7 UCMR5	
810-59137-2	Catawba River WTP	Total/NA	Drinking Water	200.7 UCMR5	
MBL 810-55464/1-A	Method Blank	Total/NA	Drinking Water	200.7 UCMR5	
LLCS 810-55464/2-A	Lab Control Sample	Total/NA	Drinking Water	200.7 UCMR5	

QC Association Summary

Client: Union County Water
Project/Site: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

Metals

Analysis Batch: 55869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-59137-1	Anson County Water Intertie	Total/NA	Drinking Water	200.7 UCMR5	55464
810-59137-2	Catawba River WTP	Total/NA	Drinking Water	200.7 UCMR5	55464
MBL 810-55464/1-A	Method Blank	Total/NA	Drinking Water	200.7 UCMR5	55464
LLCS 810-55464/2-A	Lab Control Sample	Total/NA	Drinking Water	200.7 UCMR5	55464

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- 16

Lab Chronicle

Client: Union County Water
 Project/Site: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

Client Sample ID: Anson County Water Intertie

Lab Sample ID: 810-59137-1

Date Collected: 04/10/23 11:05

Matrix: Drinking Water

Date Received: 04/11/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			57378	KL	EA SB	05/02/23 06:41
Total/NA	Analysis	533		1	57437	MH	EA SB	05/03/23 15:42
Total/NA	Prep	537.1 DW			55902	SS	EA SB	04/19/23 05:36
Total/NA	Analysis	537.1 UCMR5		1	56000	ST	EA SB	04/20/23 23:13
Total/NA	Prep	200.7 UCMR5			55464	AC	EA SB	04/16/23 10:29
Total/NA	Analysis	200.7 UCMR5		1	55869	NB	EA SB	04/18/23 19:30

Client Sample ID: Catawba River WTP

Lab Sample ID: 810-59137-2

Date Collected: 04/10/23 09:59

Matrix: Drinking Water

Date Received: 04/11/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			57378	KL	EA SB	05/02/23 06:41
Total/NA	Analysis	533		1	57437	MH	EA SB	05/03/23 15:29
Total/NA	Prep	537.1 DW			55902	SS	EA SB	04/19/23 05:36
Total/NA	Analysis	537.1 UCMR5		1	56000	ST	EA SB	04/20/23 23:24
Total/NA	Prep	200.7 UCMR5			55464	AC	EA SB	04/16/23 10:29
Total/NA	Analysis	200.7 UCMR5		1	55869	NB	EA SB	04/18/23 19:32

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: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

Laboratory: Eurofins Eaton Analytical South Bend

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

Authority	Program	Identification Number	Expiration Date
USEPA UCMR 5	US Federal Programs	IN00035	12-31-25

- 1
- 2
- 3
- 4
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- 6
- 7
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- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Method Summary

Client: Union County Water
Project/Site: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

Method	Method Description	Protocol	Laboratory
533	Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water	EPA	EA SB
537.1 UCMR5	Perfluorinated Alkyl Acids (LC/MS)	EPA	EA SB
200.7 UCMR5	Metals (ICP)	EPA	EA SB
200.7 UCMR5	Preparation, Total Recoverable Metals	EPA	EA SB
533	Extraction of Perfluorinated and Polyfluorinated Alkyl Acids	EPA	EA SB
537.1 DW	Extraction of Perfluorinated 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: Union County Water NC0190413 UCMR5

Job ID: 810-59137-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-59137-1	Anson County Water Intertie	Drinking Water	04/10/23 11:05	04/11/23 09:30
810-59137-1FRB	Anson County Water Intertie	Drinking Water	04/10/23 11:01	04/11/23 09:30
810-59137-2	Catawba River WTP	Drinking Water	04/10/23 09:59	04/11/23 09:30
810-59137-2FRB	Catawba River WTP	Drinking Water	04/10/23 09:55	04/11/23 09:30

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South Bend, IN
 110 S Hill Street
 South Bend, IN 46617
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Chain of Custody Record



810-59137 Chain of Custody

eurofins
 Environment Testing

Client Information
 Client Contact: Junior Honeycutt
 Company: Union County Water
 Address: 500 N Main St
 City: Monroe, NC, 28112
 Phone: 704-289-7044(Tel)
 Email: jhoneycutt@unioncountync.gov
 Project Name: Union County Water NC0190413
 Site: S50W#

Sampler: **Jordan Helms**
 Phone: 704-291-0828
 Lab Pnl: Mathews, Joe
 E-Mail: Joe.Mathews@et.eurofins.com

Due Date Requested:
 TAT Requested (days):
 Compliance Project: Yes No
 Purchase Order not required
 Project #: 81004582
 PWSID:

Analysis Requested

Field Filtered Sample (Yes or No)
 Perform MS/MSD (Yes or No)
 200.7_UCMR5 - UCMR5_200.7
 533_UCMR5 -
 537.1_UCMR5 -

Preservation Codes:
 A - HCL
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - NaHSO4
 F - MeOH
 G - Anchlor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 M - Hexane
 N - None
 O - AshKz2
 P - Na2OAS
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Dodecylhydrate
 U - Acetone
 V - MCAA
 W - pH 4.5
 Y - Trizma
 Z - other (Specify)

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Other)	Preservation Code	ID	N	Y	Total Number of containers	Special Instructions/Note:
Anson County Water Interlie	4/10/23	11:05A	G	drinking Water		✓	✓	✓		
Catawba River WTP	4/10/23	9:59A	G	drinking Water		✓	✓	✓		
Anson County Water Interlie FB	4/10/23	11:01A	G	drinking Water		✓	✓	✓		
Catawba River WTP FB	4/10/23	9:55A	G	drinking Water		✓	✓	✓		

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____

Relinquished by: *Jordan Helms* Date/Time: 4/10/23 12:00P Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: Yes No Custody Seal No.: _____

Received by: *Yelby Jus* Date/Time: 04-11-23 09:30 Company: _____

Received by: _____ Date/Time: _____ Company: _____

Cooler Temperature(s) °C and Other Remarks: _____

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"UCMR 5 Sampling Form for Single Collection Site"

(Separate form is needed for each collection site)



Environment Testing
 America

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Company Contact: Donald Honeycutt
 Company Name: Union County Water
 Company Address: 500 W main st
Monroe NC 28112
 Phone: 704-289-7041
 Email: junior.honeycutt@unioncountync.gov
 Purchase Order: _____

Lab PM(name): _____
 PM Email: _____
 EEA Project: _____
 PWSID: _____
 FacID: _____
 SPID: _____
 FacName: _____
 SPName: _____
 Sampling Event: _____

Water System Name: Union County Water System
 Collection Location: Anson County Water Intertie
 Scheduled Collection Date: 4/10/23

Sampler Name (Print): Jordan Helms

Date/Time Sampled: 4/10/23 11:01A

Client Storage temp, if > 2 days from collection: _____

AREA BELOW FOR LAB USE ONLY

For UCMR 5 specific criteria see: REC-WI55108 Guidance Document for UCMR 5 Sample Receiving Requirements and QA-SOP-SOP48964 UCMR 5 QAPP

Method	Type	# Bot	IR Gun#: <u>17</u>		pH* value	Ice: <u>Wet</u> / Blue		Cl (P/A) **	Sample Comments	✓if sample is invalid
			Temp °C (10°C within 2 days of collection, 6°C for > 2 days)	Initial / Corrected		✓if receipt pH acceptable	✓if pH needs adjustment			
200.7	FS	1								
200.7	FS	2								
533	FS	1		<u>0.4 / 0.2</u>				<u>A</u>		
533	FS	2		<u>NA /</u>				<u>A</u>		
533	FS	3		<u>NA /</u>				<u>A</u>		
533	FRB	1		<u>0.4 / 0.2</u>				<u>A</u>		
537.1	FS	1		<u>0.2 / 0.0</u>				<u>A</u>		
537.1	FS	2		<u>NA /</u>				<u>A</u>		
537.1	FS	3		<u>NA /</u>				<u>A</u>		
537.1	FRB	1		<u>1.2 / 1.0</u>				<u>A</u>		

* pH <2 for 200.7. pH 6-8 for 533 & 537.1. Note: 200.7 & 533 pH may be adjusted upon receipt.

** A = Absent if Free Cl <0.1 mg/L; P = Chlorine is present

Received By: Riley

Date/Time: 04-11-23 0930

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South Bend, IN 46617

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"UCMR 5 Sampling Form for Single Collection Site"

(Separate form is needed for each collection site)



Environment Testing
America

Company Contact: Donald Honeycutt
 Company Name: Union County Water
 Company Address: 500 N main st
monroe NC 28112
 Phone: 704-289-7044
 Email: Junior.honeycutt@unioncountync.gov
 Purchase Order: _____

Lab PM(name): _____
 PM Email: _____
 EEA Project: _____
 PWSID: _____
 FacID: _____
 SPID: _____
 FacName: _____
 SPName: _____
 Sampling Event: _____

Water System Name: Union County Water System
 Collection Location: Catawba River WTP
 Scheduled Collection Date: 4/10/23

Sampler Name (Print): Jordan Heims

Date/Time Sampled: 4/10/23 9:55A

Client Storage temp, if > 2 days from collection: _____

AREA BELOW FOR LAB USE ONLY

For UCMR 5 specific criteria see: REC-WI55108 Guidance Document for UCMR 5 Sample Receiving Requirements and QA-SOP-SOP48964 UCMR 5 QAPP

Method	Type	# Bot	IR Gun#: <u>17</u>		pH* value	Ice: <u>Wet</u> / Blue		Cl (P/A)**	Sample Comments	✓if sample is invalid
			Temp °C (10°C within 2 days of collection, 6°C for > 2 days)	Initial / Corrected		✓if receipt pH acceptable	✓if pH needs adjustment			
200.7	FS	1								
200.7	ES	2								
533	FS	1		<u>3.4 / 3.2</u>				<u>A</u>		
533	FS	2		<u>NA /</u>				<u>A</u>		
533	FS	3		<u>NA /</u>				<u>A</u>		
533	FRB	1		<u>1.6 / 1.4</u>				<u>A</u>		
537.1	FS	1		<u>0.4 / 0.2</u>				<u>A</u>		
537.1	FS	2		<u>NA /</u>				<u>A</u>		
537.1	FS	3		<u>NA /</u>				<u>A</u>		
537.1	FRB	1		<u>1.2 / 1.0</u>				<u>A</u>		

* pH < 2 for 200.7. pH 6-8 for 533 & 537.1. Note: 200.7 & 533 pH may be adjusted upon receipt.

** A = Absent if Free Cl < 0.1 mg/L; P = Chlorine is present

Received By: Riley

Date/Time: 04-11-23 0930

Login Sample Receipt Checklist

Client: Union County Water

Job Number: 810-59137-1

Login Number: 59137

List Source: Eurofins Eaton Analytical South Bend

List Number: 1

Creator: Trott, Riley

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	