



ANALYTICAL REPORT

PREPARED FOR

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Generated 9/21/2023 8:48:38 AM

JOB DESCRIPTION

UCMR5 - CT1040011 - SE2 - Deep River Water

JOB NUMBER

810-75273-1

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: Norwich Public Utilities

Job ID: 810-75273-1

Project/Site: UCMR5 - CT1040011 - SE2 - Deep River Water

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: Norwich Public Utilities
Project/Site: UCMR5 - CT1040011 - SE2 - Deep River Water

Job ID: 810-75273-1

Job ID: 810-75273-1

Laboratory: Eurofins Eaton Analytical South Bend

Narrative

Job Narrative 810-75273-1

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 are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD 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 sample was received on 8/24/2023 9:00 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice.

PFAS

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: Norwich Public Utilities
Project/Site: UCMR5 - CT1040011 - SE2 - Deep River Water

Job ID: 810-75273-1

Client Sample ID: WSFID00700/Deep River Reservoir
PWSID Number: CT1040011

Lab Sample ID: 810-75273-1

No Detections.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Norwich Public Utilities
Project/Site: UCMR5 - CT1040011 - SE2 - Deep River Water

Job ID: 810-75273-1

Client Sample ID: WSFID00700/Deep River Reservoir

Lab Sample ID: 810-75273-1

Date Collected: 08/23/23 08:40

Matrix: Drinking Water

Date Received: 08/24/23 09:00

PWSID Number: CT1040011

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0049		0.0049	ug/L		09/13/23 10:04	09/14/23 17:49	1
Perfluoropentanoic acid (PFPeA)	<0.0029		0.0029	ug/L		09/13/23 10:04	09/14/23 17:49	1
Perfluorohexanoic acid (PFHxA)	<0.0029		0.0029	ug/L		09/13/23 10:04	09/14/23 17:49	1
Perfluoroheptanoic acid (PFHpA)	<0.0029		0.0029	ug/L		09/13/23 10:04	09/14/23 17:49	1
Perfluorooctanoic acid (PFOA)	<0.0039		0.0039	ug/L		09/13/23 10:04	09/14/23 17:49	1
Perfluorononanoic acid (PFNA)	<0.0039		0.0039	ug/L		09/13/23 10:04	09/14/23 17:49	1
Perfluorodecanoic acid (PFDA)	<0.0029		0.0029	ug/L		09/13/23 10:04	09/14/23 17:49	1
Perfluoroundecanoic acid (PFUnA)	<0.0020		0.0020	ug/L		09/13/23 10:04	09/14/23 17:49	1
Perfluorododecanoic acid (PFDoA)	<0.0029		0.0029	ug/L		09/13/23 10:04	09/14/23 17:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0029		0.0029	ug/L		09/13/23 10:04	09/14/23 17:49	1
Perfluorobutanesulfonic acid (PFBS)	<0.0029		0.0029	ug/L		09/13/23 10:04	09/14/23 17:49	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0029		0.0029	ug/L		09/13/23 10:04	09/14/23 17:49	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0029		0.0029	ug/L		09/13/23 10:04	09/14/23 17:49	1
Perfluorooctanesulfonic acid (PFOS)	<0.0039		0.0039	ug/L		09/13/23 10:04	09/14/23 17:49	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0039		0.0039	ug/L		09/13/23 10:04	09/14/23 17:49	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0049		0.0049	ug/L		09/13/23 10:04	09/14/23 17:49	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<0.0020		0.0020	ug/L		09/13/23 10:04	09/14/23 17:49	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<0.0049		0.0049	ug/L		09/13/23 10:04	09/14/23 17:49	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0029		0.0029	ug/L		09/13/23 10:04	09/14/23 17:49	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0049		0.0049	ug/L		09/13/23 10:04	09/14/23 17:49	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0049		0.0049	ug/L		09/13/23 10:04	09/14/23 17:49	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0196		0.0196	ug/L		09/13/23 10:04	09/14/23 17:49	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0039		0.0039	ug/L		09/13/23 10:04	09/14/23 17:49	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0029		0.0029	ug/L		09/13/23 10:04	09/14/23 17:49	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.0029		0.0029	ug/L		09/13/23 10:04	09/14/23 17:49	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	102		50 - 200	09/13/23 10:04	09/14/23 17:49	1
13C4 PFBA	107		50 - 200	09/13/23 10:04	09/14/23 17:49	1
13C3 PFBS	101		50 - 200	09/13/23 10:04	09/14/23 17:49	1
13C5 PFPeA	106		50 - 200	09/13/23 10:04	09/14/23 17:49	1
13C5 PFHxA	104		50 - 200	09/13/23 10:04	09/14/23 17:49	1
13C4 PFHpA	108		50 - 200	09/13/23 10:04	09/14/23 17:49	1
13C8 PFOA	109		50 - 200	09/13/23 10:04	09/14/23 17:49	1
13C9 PFNA	112		50 - 200	09/13/23 10:04	09/14/23 17:49	1
13C6 PFDA	102		50 - 200	09/13/23 10:04	09/14/23 17:49	1
13C7 PFUnA	96		50 - 200	09/13/23 10:04	09/14/23 17:49	1
13C2 PFDoA	94		50 - 200	09/13/23 10:04	09/14/23 17:49	1
13C8 PFOS	100		50 - 200	09/13/23 10:04	09/14/23 17:49	1
13C3 PFHxS	102		50 - 200	09/13/23 10:04	09/14/23 17:49	1

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Client Sample Results

Client: Norwich Public Utilities
Project/Site: UCMR5 - CT1040011 - SE2 - Deep River Water

Job ID: 810-75273-1

Client Sample ID: WSFID00700/Deep River Reservoir

Lab Sample ID: 810-75273-1

Date Collected: 08/23/23 08:40

Matrix: Drinking Water

Date Received: 08/24/23 09:00

PWSID Number: CT1040011

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	96		50 - 200	09/13/23 10:04	09/14/23 17:49	1
13C2-6:2-FTS	101		50 - 200	09/13/23 10:04	09/14/23 17:49	1
13C2-8:2-FTS	100		50 - 200	09/13/23 10:04	09/14/23 17:49	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		09/01/23 06:03	09/02/23 19:36	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0056		0.0056	ug/L		09/01/23 06:03	09/02/23 19:36	1
Perfluorotetradecanoic acid (PFTA)	<0.0075		0.0075	ug/L		09/01/23 06:03	09/02/23 19:36	1
Perfluorotridecanoic acid (PFTrDA)	<0.0066		0.0066	ug/L		09/01/23 06:03	09/02/23 19:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	113		70 - 130	09/01/23 06:03	09/02/23 19:36	1
13C2 PFHxA	113		70 - 130	09/01/23 06:03	09/02/23 19:36	1
13C2 PFDA	116		70 - 130	09/01/23 06:03	09/02/23 19:36	1
13C3 HFPO-DA	109		70 - 130	09/01/23 06:03	09/02/23 19:36	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		08/31/23 13:33	09/01/23 10:21	1

Surrogate Summary

Client: Norwich Public Utilities
Project/Site: UCMR5 - CT1040011 - SE2 - Deep River Water

Job ID: 810-75273-1

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)
810-75273-1	WSFID00700/Deep River Reser	113	113	116	109
LLCS 810-72112/2-A	Lab Control Sample	114	113	116	109
MBL 810-72112/1-A	Method Blank	109	113	112	109

Surrogate Legend

d5NEFOS = d5-NEtFOSAA

PFHxA = 13C2 PFHxA

PFDA = 13C2 PFDA

HFPODA = 13C3 HFPO-DA

Isotope Dilution Summary

Client: Norwich Public Utilities
Project/Site: UCMR5 - CT1040011 - SE2 - Deep River Water

Job ID: 810-75273-1

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)
810-75273-1	WSFID00700/Deep River Reser	102	107	101	106	104	108	109	112
LLCS 810-73236/2-A	Lab Control Sample	97	104	101	102	103	102	105	105
MBL 810-73236/1-A	Method Blank	101	107	104	108	106	104	105	108

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	C6PFDA (50-200)	13C7PUA (50-200)	PFDaA (50-200)	C8PFOS (50-200)	C3PFHS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
810-75273-1	WSFID00700/Deep River Reser	102	96	94	100	102	96	101	100
LLCS 810-73236/2-A	Lab Control Sample	100	99	98	101	101	96	104	100
MBL 810-73236/1-A	Method Blank	101	99	97	104	102	98	106	102

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
 PFDaA = 13C2 PFDaA
 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: Norwich Public Utilities
Project/Site: UCMR5 - CT1040011 - SE2 - Deep River Water

Job ID: 810-75273-1

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

Lab Sample ID: MBL 810-73236/1-A

Matrix: Drinking Water

Analysis Batch: 73298

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 73236

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0005		0.0050	ug/L		09/13/23 10:04	09/14/23 14:11	1
Perfluoropentanoic acid (PFPeA)	<0.0004		0.0030	ug/L		09/13/23 10:04	09/14/23 14:11	1
Perfluorohexanoic acid (PFHxA)	<0.0004		0.0030	ug/L		09/13/23 10:04	09/14/23 14:11	1
Perfluoroheptanoic acid (PFHpA)	<0.0004		0.0030	ug/L		09/13/23 10:04	09/14/23 14:11	1
Perfluorooctanoic acid (PFOA)	<0.0004		0.0040	ug/L		09/13/23 10:04	09/14/23 14:11	1
Perfluorononanoic acid (PFNA)	<0.0004		0.0040	ug/L		09/13/23 10:04	09/14/23 14:11	1
Perfluorodecanoic acid (PFDA)	<0.0004		0.0030	ug/L		09/13/23 10:04	09/14/23 14:11	1
Perfluoroundecanoic acid (PFUnA)	<0.0004		0.0020	ug/L		09/13/23 10:04	09/14/23 14:11	1
Perfluorododecanoic acid (PFDoA)	<0.0004		0.0030	ug/L		09/13/23 10:04	09/14/23 14:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0004		0.0030	ug/L		09/13/23 10:04	09/14/23 14:11	1
Perfluorobutanesulfonic acid (PFBS)	<0.0004		0.0030	ug/L		09/13/23 10:04	09/14/23 14:11	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0004		0.0030	ug/L		09/13/23 10:04	09/14/23 14:11	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0004		0.0030	ug/L		09/13/23 10:04	09/14/23 14:11	1
Perfluorooctanesulfonic acid (PFOS)	<0.0004		0.0040	ug/L		09/13/23 10:04	09/14/23 14:11	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0004		0.0040	ug/L		09/13/23 10:04	09/14/23 14:11	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0005		0.0050	ug/L		09/13/23 10:04	09/14/23 14:11	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0005		0.0020	ug/L		09/13/23 10:04	09/14/23 14:11	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0005		0.0050	ug/L		09/13/23 10:04	09/14/23 14:11	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0006		0.0030	ug/L		09/13/23 10:04	09/14/23 14:11	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0007		0.0050	ug/L		09/13/23 10:04	09/14/23 14:11	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0006		0.0050	ug/L		09/13/23 10:04	09/14/23 14:11	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0009		0.0200	ug/L		09/13/23 10:04	09/14/23 14:11	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0003		0.0040	ug/L		09/13/23 10:04	09/14/23 14:11	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0004		0.0030	ug/L		09/13/23 10:04	09/14/23 14:11	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.0005		0.0030	ug/L		09/13/23 10:04	09/14/23 14:11	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	101		50 - 200	09/13/23 10:04	09/14/23 14:11	1
13C4 PFBA	107		50 - 200	09/13/23 10:04	09/14/23 14:11	1
13C3 PFBS	104		50 - 200	09/13/23 10:04	09/14/23 14:11	1
13C5 PFPeA	108		50 - 200	09/13/23 10:04	09/14/23 14:11	1
13C5 PFHxA	106		50 - 200	09/13/23 10:04	09/14/23 14:11	1
13C4 PFHpA	104		50 - 200	09/13/23 10:04	09/14/23 14:11	1
13C8 PFOA	105		50 - 200	09/13/23 10:04	09/14/23 14:11	1
13C9 PFNA	108		50 - 200	09/13/23 10:04	09/14/23 14:11	1
13C6 PFDA	101		50 - 200	09/13/23 10:04	09/14/23 14:11	1
13C7 PFUnA	99		50 - 200	09/13/23 10:04	09/14/23 14:11	1
13C2 PFDoA	97		50 - 200	09/13/23 10:04	09/14/23 14:11	1
13C8 PFOS	104		50 - 200	09/13/23 10:04	09/14/23 14:11	1

Eurofins Eaton Analytical South Bend

QC Sample Results

Client: Norwich Public Utilities
Project/Site: UCMR5 - CT1040011 - SE2 - Deep River Water

Job ID: 810-75273-1

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

Lab Sample ID: MBL 810-73236/1-A

Matrix: Drinking Water

Analysis Batch: 73298

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 73236

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	102		50 - 200	09/13/23 10:04	09/14/23 14:11	1
13C2-4:2-FTS	98		50 - 200	09/13/23 10:04	09/14/23 14:11	1
13C2-6:2-FTS	106		50 - 200	09/13/23 10:04	09/14/23 14:11	1
13C2-8:2-FTS	102		50 - 200	09/13/23 10:04	09/14/23 14:11	1

Lab Sample ID: LLCS 810-73236/2-A

Matrix: Drinking Water

Analysis Batch: 73298

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 73236

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	0.00200	0.0021		ug/L		105	50 - 150
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	0.0020		ug/L		99	50 - 150
Perfluorooctanoic acid (PFOA)	0.00200	0.0019		ug/L		93	50 - 150
Perfluorononanoic acid (PFNA)	0.00200	0.0021		ug/L		103	50 - 150
Perfluorodecanoic acid (PFDA)	0.00200	0.0022		ug/L		109	50 - 150
Perfluoroundecanoic acid (PFUnA)	0.00200	0.0020		ug/L		101	50 - 150
Perfluorododecanoic acid (PFDoA)	0.00200	0.0020		ug/L		100	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.00189	0.0019		ug/L		100	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.00178	0.0017		ug/L		97	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.00183	0.0017		ug/L		96	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	0.00191	0.0019		ug/L		97	50 - 150
Perfluorooctanesulfonic acid (PFOS)	0.00186	0.0018		ug/L		97	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.00188	0.0018		ug/L		94	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.00200	0.0019		ug/L		94	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.00187	0.0018		ug/L		95	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.00189	0.0018		ug/L		96	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	0.0020		ug/L		104	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.00192	0.0021		ug/L		108	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.00200	0.0019		ug/L		96	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.00200	0.0020		ug/L		98	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.00200	0.0019		ug/L		94	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.00178	0.0019		ug/L		105	50 - 150

Eurofins Eaton Analytical South Bend

QC Sample Results

Client: Norwich Public Utilities
Project/Site: UCMR5 - CT1040011 - SE2 - Deep River Water

Job ID: 810-75273-1

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

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	97		50 - 200
13C4 PFBA	104		50 - 200
13C3 PFBS	101		50 - 200
13C5 PFPeA	102		50 - 200
13C5 PFHxA	103		50 - 200
13C4 PFHpA	102		50 - 200
13C8 PFOA	105		50 - 200
13C9 PFNA	105		50 - 200
13C6 PFDA	100		50 - 200
13C7 PFUnA	99		50 - 200
13C2 PFDoA	98		50 - 200
13C8 PFOS	101		50 - 200
13C3 PFHxS	101		50 - 200
13C2-4:2-FTS	96		50 - 200
13C2-6:2-FTS	104		50 - 200
13C2-8:2-FTS	100		50 - 200

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

Lab Sample ID: MBL 810-72112/1-A
Matrix: Drinking Water
Analysis Batch: 72194

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72112

Analyte	MBL		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0005		0.0050	ug/L		09/01/23 06:03	09/02/23 14:50	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0006		0.0060	ug/L		09/01/23 06:03	09/02/23 14:50	1
Perfluorotetradecanoic acid (PFTA)	<0.0007		0.0080	ug/L		09/01/23 06:03	09/02/23 14:50	1
Perfluorotridecanoic acid (PFTTrDA)	<0.0006		0.0070	ug/L		09/01/23 06:03	09/02/23 14:50	1

Surrogate	MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
d5-NEtFOSAA	109		70 - 130	09/01/23 06:03	09/02/23 14:50	1
13C2 PFHxA	113		70 - 130	09/01/23 06:03	09/02/23 14:50	1
13C2 PFDA	112		70 - 130	09/01/23 06:03	09/02/23 14:50	1
13C3 HFPO-DA	109		70 - 130	09/01/23 06:03	09/02/23 14:50	1

Lab Sample ID: LLCS 810-72112/2-A
Matrix: Drinking Water
Analysis Batch: 72194

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72112

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.00200	0.0021		ug/L		104	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.00200	0.0020		ug/L		102	50 - 150
Perfluorotetradecanoic acid (PFTA)	0.00200	0.0020		ug/L		101	50 - 150
Perfluorotridecanoic acid (PFTTrDA)	0.00200	0.0021		ug/L		103	50 - 150

Surrogate	LLCS		Limits
	%Recovery	Qualifier	
d5-NEtFOSAA	114		70 - 130

Eurofins Eaton Analytical South Bend

QC Sample Results

Client: Norwich Public Utilities
Project/Site: UCMR5 - CT1040011 - SE2 - Deep River Water

Job ID: 810-75273-1

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

Lab Sample ID: LLCS 810-72112/2-A
Matrix: Drinking Water
Analysis Batch: 72194

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72112

	LLCS	LLCS	
Surrogate	%Recovery	Qualifier	Limits
13C2 PFHxA	113		70 - 130
13C2 PFDA	116		70 - 130
13C3 HFPO-DA	109		70 - 130

Method: 200.7 UCMR5 - Metals (ICP)

Lab Sample ID: MBL 810-72011/1-A
Matrix: Drinking Water
Analysis Batch: 72148

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 72011

Analyte	MBL	MBL							
	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Lithium	<0.520		9.00	ug/L		08/31/23 13:33	09/01/23 09:30		1

Lab Sample ID: LLCS 810-72011/2-A
Matrix: Drinking Water
Analysis Batch: 72148

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 72011

Analyte	Spike	LLCS	LLCS						
	Added	Result	Qualifier	Unit	D	%Rec	%Rec	Limits	
Lithium	9.00	8.83	J	ug/L		98		50 - 150	

QC Association Summary

Client: Norwich Public Utilities
Project/Site: UCMR5 - CT1040011 - SE2 - Deep River Water

Job ID: 810-75273-1

LCMS

Prep Batch: 72112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-75273-1	WSFID00700/Deep River Reservoir	Total/NA	Drinking Water	537.1 DW	
MBL 810-72112/1-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LLCS 810-72112/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 72194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-75273-1	WSFID00700/Deep River Reservoir	Total/NA	Drinking Water	537.1 UCMR5	72112
MBL 810-72112/1-A	Method Blank	Total/NA	Drinking Water	537.1 UCMR5	72112
LLCS 810-72112/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 UCMR5	72112

Prep Batch: 73236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-75273-1	WSFID00700/Deep River Reservoir	Total/NA	Drinking Water	533	
MBL 810-73236/1-A	Method Blank	Total/NA	Drinking Water	533	
LLCS 810-73236/2-A	Lab Control Sample	Total/NA	Drinking Water	533	

Analysis Batch: 73298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-75273-1	WSFID00700/Deep River Reservoir	Total/NA	Drinking Water	533	73236
MBL 810-73236/1-A	Method Blank	Total/NA	Drinking Water	533	73236
LLCS 810-73236/2-A	Lab Control Sample	Total/NA	Drinking Water	533	73236

Metals

Prep Batch: 72011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-75273-1	WSFID00700/Deep River Reservoir	Total/NA	Drinking Water	200.7 UCMR5	
MBL 810-72011/1-A	Method Blank	Total/NA	Drinking Water	200.7 UCMR5	
LLCS 810-72011/2-A	Lab Control Sample	Total/NA	Drinking Water	200.7 UCMR5	

Analysis Batch: 72148

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-75273-1	WSFID00700/Deep River Reservoir	Total/NA	Drinking Water	200.7 UCMR5	72011
MBL 810-72011/1-A	Method Blank	Total/NA	Drinking Water	200.7 UCMR5	72011
LLCS 810-72011/2-A	Lab Control Sample	Total/NA	Drinking Water	200.7 UCMR5	72011

Lab Chronicle

Client: Norwich Public Utilities

Job ID: 810-75273-1

Project/Site: UCMR5 - CT1040011 - SE2 - Deep River Water

Client Sample ID: WSFID00700/Deep River Reservoir

Lab Sample ID: 810-75273-1

Date Collected: 08/23/23 08:40

Matrix: Drinking Water

Date Received: 08/24/23 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			73236	ER	EA SB	09/13/23 10:04
Total/NA	Analysis	533		1	73298	KB	EA SB	09/14/23 17:49
Total/NA	Prep	537.1 DW			72112	AD	EA SB	09/01/23 06:03
Total/NA	Analysis	537.1 UCMR5		1	72194	PP	EA SB	09/02/23 19:36
Total/NA	Prep	200.7 UCMR5			72011	AC	EA SB	08/31/23 13:33
Total/NA	Analysis	200.7 UCMR5		1	72148	AC	EA SB	09/01/23 10:21

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: Norwich Public Utilities
Project/Site: UCMR5 - CT1040011 - SE2 - Deep River Water

Job ID: 810-75273-1

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

Method Summary

Client: Norwich Public Utilities

Job ID: 810-75273-1

Project/Site: UCMR5 - CT1040011 - SE2 - Deep River Water

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: Norwich Public Utilities
Project/Site: UCMR5 - CT1040011 - SE2 - Deep River Water

Job ID: 810-75273-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
810-75273-1	WSFID00700/Deep River Reservoir	Drinking Water	08/23/23 08:40	08/24/23 09:00	CT1040011

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

South Bend, IN

110 S Hill Street

South Bend, IN 46617

Phone (574) 233-4777; Phone (574) 233-8207

"UCMR 5 Sampling Form for Single Collection Site"

(Separate form is needed for each collection site)



Environment Testing
America

Company Contact: Jesse Burns
Company Name: Norwich Public Utilities
Company Address: 16 South Golden St.
Norwich CT 06360
Phone: (860) 887-3162
Email: jesseturns@npu.com
Purchase Order: _____

Lab PM(name): _____
PM Email: _____
EEA Project: _____
PWSID: CT1040011
FacID: WSFID 00700
SPID: _____
FacName: Deep River Reservoir
SPName: _____
Sampling Event: 3rd Quarter 2023

Water System Name: Norwich Public Utilities
Collection Location: Deep River Reservoir Entry Point
Scheduled Collection Date: 8/23/23

Sampler Name (Print): Steven Colli

Date/Time Sampled: 8/23/23 8:40

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

			IR Gun#: 23	Ice: Wet ✓ Blue				Sample Comments	✓if sample is recalled
Method	Type	# Bot	Temp °C (10°C within 2 days of collection, 6°C for > 2 days) Initial / Corrected	pH* value	✓if receipt pH acceptable	✓if pH needs adjustment	Cl (P/A) **		
200.7	FS	1			Y				810-75273 Chain of Custody
200.7	FS	2							
533	FS	1	6.8 / 6		Y		A		
533	FS	2	6.8 / 6		Y		A		
533	FS	3	6.8 / 6		Y		A		
533	FRB	1	6.4 / 5.4		Y		A		
537.1	FS	1	6.4 / 5.4		Y		A		
537.1	FS	2	5.8 / 5		Y		A		
537.1	FS	3	5.8 / 5		Y		A		
537.1	FRB	1	6.4 / 5.4		Y		A		

* 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: Robbin A. Allen

Date/Time: 8-24-23 9:00A

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Login Sample Receipt Checklist

Client: Norwich Public Utilities

Job Number: 810-75273-1

Login Number: 75273

List Number: 1

Creator: Williams, Kameron

List Source: Eurofins Eaton Analytical South Bend

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	