



ANALYTICAL REPORT

PREPARED FOR

Attn: Jesse Burns
Norwich Public Utilities
16 South Golden St
Norwich, Connecticut 06360

Generated 6/29/2023 10:40:04 AM

JOB DESCRIPTION

UCMR5 - CT1040011 - SE1 - Stony Brook Water

JOB NUMBER

810-64254-1

Eurofins Eaton Analytical South Bend

Job Notes

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Authorization



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Authorized for release by
Pamela Brown, Project Manager
Pamela.Brown@et.eurofinsus.com
(574)233-4777

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Definitions/Glossary

Client: Norwich Public Utilities

Job ID: 810-64254-1

Project/Site: UCMR5 - CT1040011 - SE1 - Stony Brook Water

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: Norwich Public Utilities
Project/Site: UCMR5 - CT1040011 - SE1 - Stony Brook Water

Job ID: 810-64254-1

Job ID: 810-64254-1

Laboratory: Eurofins Eaton Analytical South Bend

Narrative

Job Narrative
810-64254-1

Receipt

The sample was received on 5/24/2023 9:20 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

Job ID: 810-64254-1

Project/Site: UCMR5 - CT1040011 - SE1 - Stony Brook Water

Client Sample ID: WSFID00701/Stony Brook Reservoir
PWSID Number: CT1040011

Lab Sample ID: 810-64254-1

☐ 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 - SE1 - Stony Brook Water

Job ID: 810-64254-1

Client Sample ID: WSFID00701/Stony Brook Reservoir

Lab Sample ID: 810-64254-1

Date Collected: 05/23/23 10:00

Matrix: Drinking Water

Date Received: 05/24/23 09:20

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)	<0.0050		0.0050	ug/L		06/12/23 09:20	06/13/23 14:12	1
Perfluoropentanoic acid (PFPeA)	<0.0030		0.0030	ug/L		06/12/23 09:20	06/13/23 14:12	1
Perfluorohexanoic acid (PFHxA)	<0.0030		0.0030	ug/L		06/12/23 09:20	06/13/23 14:12	1
Perfluoroheptanoic acid (PFHpA)	<0.0030		0.0030	ug/L		06/12/23 09:20	06/13/23 14:12	1
Perfluorooctanoic acid (PFOA)	<0.0040		0.0040	ug/L		06/12/23 09:20	06/13/23 14:12	1
Perfluorononanoic acid (PFNA)	<0.0040		0.0040	ug/L		06/12/23 09:20	06/13/23 14:12	1
Perfluorodecanoic acid (PFDA)	<0.0030		0.0030	ug/L		06/12/23 09:20	06/13/23 14:12	1
Perfluoroundecanoic acid (PFUnA)	<0.0020		0.0020	ug/L		06/12/23 09:20	06/13/23 14:12	1
Perfluorododecanoic acid (PFDoA)	<0.0030		0.0030	ug/L		06/12/23 09:20	06/13/23 14:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0030		0.0030	ug/L		06/12/23 09:20	06/13/23 14:12	1
Perfluorobutanesulfonic acid (PFBS)	<0.0030		0.0030	ug/L		06/12/23 09:20	06/13/23 14:12	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0030		0.0030	ug/L		06/12/23 09:20	06/13/23 14:12	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0030		0.0030	ug/L		06/12/23 09:20	06/13/23 14:12	1
Perfluorooctanesulfonic acid (PFOS)	<0.0040		0.0040	ug/L		06/12/23 09:20	06/13/23 14:12	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0040		0.0040	ug/L		06/12/23 09:20	06/13/23 14:12	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0050		0.0050	ug/L		06/12/23 09:20	06/13/23 14:12	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0020		0.0020	ug/L		06/12/23 09:20	06/13/23 14:12	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0050		0.0050	ug/L		06/12/23 09:20	06/13/23 14:12	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0030		0.0030	ug/L		06/12/23 09:20	06/13/23 14:12	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0050		0.0050	ug/L		06/12/23 09:20	06/13/23 14:12	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0050		0.0050	ug/L		06/12/23 09:20	06/13/23 14:12	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0200		0.0200	ug/L		06/12/23 09:20	06/13/23 14:12	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0040		0.0040	ug/L		06/12/23 09:20	06/13/23 14:12	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0030		0.0030	ug/L		06/12/23 09:20	06/13/23 14:12	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.0030		0.0030	ug/L		06/12/23 09:20	06/13/23 14:12	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	90		50 - 200	06/12/23 09:20	06/13/23 14:12	1
13C4 PFBA	100		50 - 200	06/12/23 09:20	06/13/23 14:12	1
13C3 PFBS	93		50 - 200	06/12/23 09:20	06/13/23 14:12	1
13C5 PFPeA	133		50 - 200	06/12/23 09:20	06/13/23 14:12	1
13C5 PFHxA	90		50 - 200	06/12/23 09:20	06/13/23 14:12	1
13C4 PFHpA	93		50 - 200	06/12/23 09:20	06/13/23 14:12	1
13C8 PFOA	94		50 - 200	06/12/23 09:20	06/13/23 14:12	1
13C9 PFNA	97		50 - 200	06/12/23 09:20	06/13/23 14:12	1
13C6 PFDA	92		50 - 200	06/12/23 09:20	06/13/23 14:12	1
13C7 PFUnA	88		50 - 200	06/12/23 09:20	06/13/23 14:12	1
13C2 PFDoA	87		50 - 200	06/12/23 09:20	06/13/23 14:12	1
13C8 PFOS	98		50 - 200	06/12/23 09:20	06/13/23 14:12	1
13C3 PFHxS	95		50 - 200	06/12/23 09:20	06/13/23 14:12	1

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Client Sample Results

Client: Norwich Public Utilities
Project/Site: UCMR5 - CT1040011 - SE1 - Stony Brook Water

Job ID: 810-64254-1

Client Sample ID: WSFID00701/Stony Brook Reservoir

Lab Sample ID: 810-64254-1

Date Collected: 05/23/23 10:00

Matrix: Drinking Water

Date Received: 05/24/23 09:20

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	95		50 - 200	06/12/23 09:20	06/13/23 14:12	1
13C2-6:2-FTS	99		50 - 200	06/12/23 09:20	06/13/23 14:12	1
13C2-8:2-FTS	102		50 - 200	06/12/23 09:20	06/13/23 14:12	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		06/01/23 06:49	06/02/23 07:11	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0057		0.0057	ug/L		06/01/23 06:49	06/02/23 07:11	1
Perfluorotetradecanoic acid (PFTA)	<0.0076		0.0076	ug/L		06/01/23 06:49	06/02/23 07:11	1
Perfluorotridecanoic acid (PFTrDA)	<0.0066		0.0066	ug/L		06/01/23 06:49	06/02/23 07:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	87		70 - 130	06/01/23 06:49	06/02/23 07:11	1
13C2 PFHxA	90		70 - 130	06/01/23 06:49	06/02/23 07:11	1
13C2 PFDA	84		70 - 130	06/01/23 06:49	06/02/23 07:11	1
13C3 HFPO-DA	90		70 - 130	06/01/23 06:49	06/02/23 07:11	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		05/30/23 16:45	05/31/23 21:28	1

Surrogate Summary

Client: Norwich Public Utilities
Project/Site: UCMR5 - CT1040011 - SE1 - Stony Brook Water

Job ID: 810-64254-1

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)
810-64254-1	WSFID00701/Stony Brook Rese	87	90	84	90
LLCS 810-60941/2-A	Lab Control Sample	82	80	85	77
MBL 810-60941/1-A	Method Blank	79	83	86	81

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 - SE1 - Stony Brook Water

Job ID: 810-64254-1

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)
810-64254-1	WSFID00701/Stony Brook Rese	90	100	93	133	90	93	94	97
LLCS 810-62093/2-A	Lab Control Sample	89	95	90	92	93	95	95	102
MBL 810-62093/1-A	Method Blank	90	95	92	94	97	96	93	102

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)
810-64254-1	WSFID00701/Stony Brook Rese	92	88	87	98	95	95	99	102
LLCS 810-62093/2-A	Lab Control Sample	98	96	94	92	92	101	120	115
MBL 810-62093/1-A	Method Blank	90	85	82	89	91	105	119	105

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 - SE1 - Stony Brook Water

Job ID: 810-64254-1

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

Lab Sample ID: MBL 810-62093/1-A

Matrix: Drinking Water

Analysis Batch: 62192

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 62093

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0005		0.0050	ug/L		06/12/23 09:20	06/13/23 11:28	1
Perfluoropentanoic acid (PFPeA)	<0.0004		0.0030	ug/L		06/12/23 09:20	06/13/23 11:28	1
Perfluorohexanoic acid (PFHxA)	<0.0004		0.0030	ug/L		06/12/23 09:20	06/13/23 11:28	1
Perfluoroheptanoic acid (PFHpA)	<0.0004		0.0030	ug/L		06/12/23 09:20	06/13/23 11:28	1
Perfluorooctanoic acid (PFOA)	<0.0004		0.0040	ug/L		06/12/23 09:20	06/13/23 11:28	1
Perfluorononanoic acid (PFNA)	<0.0004		0.0040	ug/L		06/12/23 09:20	06/13/23 11:28	1
Perfluorodecanoic acid (PFDA)	<0.0004		0.0030	ug/L		06/12/23 09:20	06/13/23 11:28	1
Perfluoroundecanoic acid (PFUnA)	<0.0004		0.0020	ug/L		06/12/23 09:20	06/13/23 11:28	1
Perfluorododecanoic acid (PFDoA)	<0.0004		0.0030	ug/L		06/12/23 09:20	06/13/23 11:28	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0004		0.0030	ug/L		06/12/23 09:20	06/13/23 11:28	1
Perfluorobutanesulfonic acid (PFBS)	<0.0004		0.0030	ug/L		06/12/23 09:20	06/13/23 11:28	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0004		0.0030	ug/L		06/12/23 09:20	06/13/23 11:28	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0004		0.0030	ug/L		06/12/23 09:20	06/13/23 11:28	1
Perfluorooctanesulfonic acid (PFOS)	0.0004		0.0040	ug/L		06/12/23 09:20	06/13/23 11:28	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0004		0.0040	ug/L		06/12/23 09:20	06/13/23 11:28	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0005		0.0050	ug/L		06/12/23 09:20	06/13/23 11:28	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0005		0.0020	ug/L		06/12/23 09:20	06/13/23 11:28	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0005		0.0050	ug/L		06/12/23 09:20	06/13/23 11:28	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0006		0.0030	ug/L		06/12/23 09:20	06/13/23 11:28	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0007		0.0050	ug/L		06/12/23 09:20	06/13/23 11:28	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0006		0.0050	ug/L		06/12/23 09:20	06/13/23 11:28	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0009		0.0200	ug/L		06/12/23 09:20	06/13/23 11:28	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0003		0.0040	ug/L		06/12/23 09:20	06/13/23 11:28	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0004		0.0030	ug/L		06/12/23 09:20	06/13/23 11:28	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.0005		0.0030	ug/L		06/12/23 09:20	06/13/23 11:28	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	90		50 - 200	06/12/23 09:20	06/13/23 11:28	1
13C4 PFBA	95		50 - 200	06/12/23 09:20	06/13/23 11:28	1
13C3 PFBS	92		50 - 200	06/12/23 09:20	06/13/23 11:28	1
13C5 PFPeA	94		50 - 200	06/12/23 09:20	06/13/23 11:28	1
13C5 PFHxA	97		50 - 200	06/12/23 09:20	06/13/23 11:28	1
13C4 PFHpA	96		50 - 200	06/12/23 09:20	06/13/23 11:28	1
13C8 PFOA	93		50 - 200	06/12/23 09:20	06/13/23 11:28	1
13C9 PFNA	102		50 - 200	06/12/23 09:20	06/13/23 11:28	1
13C6 PFDA	90		50 - 200	06/12/23 09:20	06/13/23 11:28	1
13C7 PFUnA	85		50 - 200	06/12/23 09:20	06/13/23 11:28	1
13C2 PFDoA	82		50 - 200	06/12/23 09:20	06/13/23 11:28	1
13C8 PFOS	89		50 - 200	06/12/23 09:20	06/13/23 11:28	1

Eurofins Eaton Analytical South Bend

QC Sample Results

Client: Norwich Public Utilities
Project/Site: UCMR5 - CT1040011 - SE1 - Stony Brook Water

Job ID: 810-64254-1

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

Lab Sample ID: MBL 810-62093/1-A

Matrix: Drinking Water

Analysis Batch: 62192

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 62093

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 PFHxS	91		50 - 200	06/12/23 09:20	06/13/23 11:28	1
13C2-4:2-FTS	105		50 - 200	06/12/23 09:20	06/13/23 11:28	1
13C2-6:2-FTS	119		50 - 200	06/12/23 09:20	06/13/23 11:28	1
13C2-8:2-FTS	105		50 - 200	06/12/23 09:20	06/13/23 11:28	1

Lab Sample ID: LLCS 810-62093/2-A

Matrix: Drinking Water

Analysis Batch: 62192

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 62093

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanoic acid (PFBA)	0.00200	0.0019		ug/L		97	50 - 150
Perfluoropentanoic acid (PFPeA)	0.00200	0.0020		ug/L		98	50 - 150
Perfluorohexanoic acid (PFHxA)	0.00200	0.0020		ug/L		99	50 - 150
Perfluoroheptanoic acid (PFHpA)	0.00200	0.0019		ug/L		97	50 - 150
Perfluorooctanoic acid (PFOA)	0.00200	0.0020		ug/L		100	50 - 150
Perfluorononanoic acid (PFNA)	0.00200	0.0021		ug/L		104	50 - 150
Perfluorodecanoic acid (PFDA)	0.00200	0.0020		ug/L		99	50 - 150
Perfluoroundecanoic acid (PFUnA)	0.00200	0.0020		ug/L		102	50 - 150
Perfluorododecanoic acid (PFDoA)	0.00200	0.0020		ug/L		102	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.00189	0.0018		ug/L		96	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.00178	0.0016		ug/L		91	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.00183	0.0017		ug/L		93	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	0.00191	0.0018		ug/L		94	50 - 150
Perfluorooctanesulfonic acid (PFOS)	0.00186	0.0018		ug/L		95	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.00188	0.0017		ug/L		90	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.00200	0.0019		ug/L		95	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.00187	0.0016		ug/L		88	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.00189	0.0018		ug/L		93	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.00188	0.0020		ug/L		105	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.00190	0.0019		ug/L		100	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.00192	0.0019		ug/L		100	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.00200	0.0021		ug/L		107	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.00200	0.0018		ug/L		89	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.00200	0.0017		ug/L		85	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.00178	0.0017		ug/L		98	50 - 150

Eurofins Eaton Analytical South Bend

QC Sample Results

Client: Norwich Public Utilities
Project/Site: UCMR5 - CT1040011 - SE1 - Stony Brook Water

Job ID: 810-64254-1

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

Isotope Dilution	LLCS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	89		50 - 200
13C4 PFBA	95		50 - 200
13C3 PFBS	90		50 - 200
13C5 PFPeA	92		50 - 200
13C5 PFHxA	93		50 - 200
13C4 PFHpA	95		50 - 200
13C8 PFOA	95		50 - 200
13C9 PFNA	102		50 - 200
13C6 PFDA	98		50 - 200
13C7 PFUnA	96		50 - 200
13C2 PFDoA	94		50 - 200
13C8 PFOS	92		50 - 200
13C3 PFHxS	92		50 - 200
13C2-4:2-FTS	101		50 - 200
13C2-6:2-FTS	120		50 - 200
13C2-8:2-FTS	115		50 - 200

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

Lab Sample ID: MBL 810-60941/1-A
Matrix: Drinking Water
Analysis Batch: 61025

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 60941

Analyte	MBL		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0005		0.0050	ug/L		06/01/23 06:49	06/02/23 04:22	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0006		0.0060	ug/L		06/01/23 06:49	06/02/23 04:22	1
Perfluorotetradecanoic acid (PFTA)	<0.0007		0.0080	ug/L		06/01/23 06:49	06/02/23 04:22	1
Perfluorotridecanoic acid (PFTTrDA)	<0.0006		0.0070	ug/L		06/01/23 06:49	06/02/23 04:22	1

Surrogate	MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
d5-NEtFOSAA	79		70 - 130	06/01/23 06:49	06/02/23 04:22	1
13C2 PFHxA	83		70 - 130	06/01/23 06:49	06/02/23 04:22	1
13C2 PFDA	86		70 - 130	06/01/23 06:49	06/02/23 04:22	1
13C3 HFPO-DA	81		70 - 130	06/01/23 06:49	06/02/23 04:22	1

Lab Sample ID: LLCS 810-60941/2-A
Matrix: Drinking Water
Analysis Batch: 61025

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 60941

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.00200	0.0016		ug/L		81	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.00200	0.0013		ug/L		66	50 - 150
Perfluorotetradecanoic acid (PFTA)	0.00200	0.0012		ug/L		62	50 - 150
Perfluorotridecanoic acid (PFTTrDA)	0.00200	0.0015		ug/L		76	50 - 150

Surrogate	LLCS		Limits
	%Recovery	Qualifier	
d5-NEtFOSAA	82		70 - 130

Eurofins Eaton Analytical South Bend

QC Sample Results

Client: Norwich Public Utilities
Project/Site: UCMR5 - CT1040011 - SE1 - Stony Brook Water

Job ID: 810-64254-1

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

Lab Sample ID: LLCS 810-60941/2-A

Matrix: Drinking Water

Analysis Batch: 61025

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 60941

	LLCS	LLCS	
Surrogate	%Recovery	Qualifier	Limits
13C2 PFHxA	80		70 - 130
13C2 PFDA	85		70 - 130
13C3 HFPO-DA	77		70 - 130

Method: 200.7 UCMR5 - Metals (ICP)

Lab Sample ID: MBL 810-60719/1-A

Matrix: Drinking Water

Analysis Batch: 60903

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 60719

Analyte	MBL	MBL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	Result	Qualifier				05/30/23 16:45	05/31/23 20:41	1
	<0.520		9.00	ug/L				

Lab Sample ID: LLCS 810-60719/2-A

Matrix: Drinking Water

Analysis Batch: 60903

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 60719

Analyte	Spike	LLCS	LLCS	Unit	D	%Rec	%Rec
	Added	Result	Qualifier			Limits	
Lithium	9.00	9.12		ug/L		101	50 - 150

QC Association Summary

Client: Norwich Public Utilities
Project/Site: UCMR5 - CT1040011 - SE1 - Stony Brook Water

Job ID: 810-64254-1

LCMS

Prep Batch: 60941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-64254-1	WSFID00701/Stony Brook Reservoir	Total/NA	Drinking Water	537.1 DW	
MBL 810-60941/1-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LLCS 810-60941/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 61025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-64254-1	WSFID00701/Stony Brook Reservoir	Total/NA	Drinking Water	537.1 UCMR5	60941
MBL 810-60941/1-A	Method Blank	Total/NA	Drinking Water	537.1 UCMR5	60941
LLCS 810-60941/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 UCMR5	60941

Prep Batch: 62093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-64254-1	WSFID00701/Stony Brook Reservoir	Total/NA	Drinking Water	533	
MBL 810-62093/1-A	Method Blank	Total/NA	Drinking Water	533	
LLCS 810-62093/2-A	Lab Control Sample	Total/NA	Drinking Water	533	

Analysis Batch: 62192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-64254-1	WSFID00701/Stony Brook Reservoir	Total/NA	Drinking Water	533	62093
MBL 810-62093/1-A	Method Blank	Total/NA	Drinking Water	533	62093
LLCS 810-62093/2-A	Lab Control Sample	Total/NA	Drinking Water	533	62093

Metals

Prep Batch: 60719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-64254-1	WSFID00701/Stony Brook Reservoir	Total/NA	Drinking Water	200.7 UCMR5	
MBL 810-60719/1-A	Method Blank	Total/NA	Drinking Water	200.7 UCMR5	
LLCS 810-60719/2-A	Lab Control Sample	Total/NA	Drinking Water	200.7 UCMR5	

Analysis Batch: 60903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-64254-1	WSFID00701/Stony Brook Reservoir	Total/NA	Drinking Water	200.7 UCMR5	60719
MBL 810-60719/1-A	Method Blank	Total/NA	Drinking Water	200.7 UCMR5	60719
LLCS 810-60719/2-A	Lab Control Sample	Total/NA	Drinking Water	200.7 UCMR5	60719

Lab Chronicle

Client: Norwich Public Utilities

Job ID: 810-64254-1

Project/Site: UCMR5 - CT1040011 - SE1 - Stony Brook Water

Client Sample ID: WSFID00701/Stony Brook Reservoir

Lab Sample ID: 810-64254-1

Date Collected: 05/23/23 10:00

Matrix: Drinking Water

Date Received: 05/24/23 09:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			62093	TK	EA SB	06/12/23 09:20
Total/NA	Analysis	533		1	62192	KB	EA SB	06/13/23 14:12
Total/NA	Prep	537.1 DW			60941	MF	EA SB	06/01/23 06:49
Total/NA	Analysis	537.1 UCMR5		1	61025	ST	EA SB	06/02/23 07:11
Total/NA	Prep	200.7 UCMR5			60719	NB	EA SB	05/30/23 16:45
Total/NA	Analysis	200.7 UCMR5		1	60903	NB	EA SB	05/31/23 21:28

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 - SE1 - Stony Brook Water

Job ID: 810-64254-1

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
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Method Summary

Client: Norwich Public Utilities

Job ID: 810-64254-1

Project/Site: UCMR5 - CT1040011 - SE1 - Stony Brook 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

Job ID: 810-64254-1

Project/Site: UCMR5 - CT1040011 - SE1 - Stony Brook Water

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
810-64254-1	WSFID00701/Stony Brook Reservoir	Drinking Water	05/23/23 10:00	05/24/23 09:20	CT1040011

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 06260

Phone: (860) 887-3162

Email: jesse.burns@npumail.com

Purchase Order: _____

L2



810-64254 Chain of Custody

PWSID: CT1040011

FacID: WSFIP00701

SPID: _____

FacName: Stony Brook Reservoir

SPName: _____

Sampling Event: 2nd Quarter 2023

10398

Water System Name: Norwich Public Utilities

Collection Location: Stony Brook Reservoir Entry Point

Scheduled Collection Date: 5/23/2023

Sampler Name (Print): Steven Coll.

Date/Time Sampled: 5/23/23 - 10:00

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#: <u>29</u>		Ice: <u>Wet</u> / Blue				
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) **	Sample Comments
200.7	FS	1						
200.7	FS	2						
533	FS	1	<u>0.8 / 1.6</u>		✓		<u>A</u>	
533	FS	2	<u>/</u>		✓		<u>A</u>	
533	FS	3	<u>/</u>		✓		<u>A</u>	
533	FRB	<u>21</u>	<u>1.2 / 2.0</u>		✓		<u>A</u>	
537.1	FS	1	<u>0.8 / 1.6</u>		✓		<u>A</u>	
537.1	FS	2	<u>/</u>		✓		<u>A</u>	
537.1	FS	3	<u>/</u>		✓		<u>A</u>	
537.1	FRB	<u>21</u>	<u>1.2 / 2.0</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

[Signature]

Date/Time

05-24-23 0920

Login Sample Receipt Checklist

Client: Norwich Public Utilities

Job Number: 810-64254-1

Login Number: 64254

List Number: 1

Creator: Moore, Gary

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	