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ANALYTICAL REPORT

PREPARED FOR

Attn: Todd Hone
City of Piqua
9801 N State Route 66
Piqua, Ohio 45356
Generated 2/17/2025 9:56:03 AM

JOB DESCRIPTION

UCMR5 - OH5501211 - SE1 - City of Piqua, OH

JOB NUMBER

810-137433-1

Eurofins Eaton Analytical South Bend

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Authorization



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Definitions/Glossary

Client: City of Piqua
 Project/Site: UCMR5 - OH5501211 - SE1 - City of Piqua, OH

Job ID: 810-137433-1

Qualifiers

LCMS	
Qualifier	Qualifier Description
>M	Blank result is greater than MDL but less than 1/3 RL

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.
☼	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: City of Piqua
Project: UCMR5 - OH5501211 - SE1 - City of Piqua, OH

Job ID: 810-137433-1

Job ID: 810-137433-1

Eurofins Eaton Analytical South Bend

Job Narrative 810-137433-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 2/11/2025 10:15 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: City of Piqua
Project/Site: UCMR5 - OH5501211 - SE1 - City of Piqua, OH

Job ID: 810-137433-1

Client Sample ID: 5562258/EP002/Treatment Plant (Piqua)
PWSID Number: OH5501211

Lab Sample ID: 810-137433-1

No Detections.

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This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: City of Piqua
 Project/Site: UCMR5 - OH5501211 - SE1 - City of Piqua, OH

Job ID: 810-137433-1

Client Sample ID: 5562258/EP002/Treatment Plant (Piqua)

Lab Sample ID: 810-137433-1

Date Collected: 02/10/25 09:00

Matrix: Drinking Water

Date Received: 02/11/25 10:15

PWSID Number: OH5501211

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		02/12/25 10:26	02/13/25 04:29	1
Perfluoropentanoic acid (PFPeA)	<0.0030		0.0030	ug/L		02/12/25 10:26	02/13/25 04:29	1
Perfluorohexanoic acid (PFHxA)	<0.0030		0.0030	ug/L		02/12/25 10:26	02/13/25 04:29	1
Perfluoroheptanoic acid (PFHpA)	<0.0030		0.0030	ug/L		02/12/25 10:26	02/13/25 04:29	1
Perfluorooctanoic acid (PFOA)	<0.0040		0.0040	ug/L		02/12/25 10:26	02/13/25 04:29	1
Perfluorononanoic acid (PFNA)	<0.0040		0.0040	ug/L		02/12/25 10:26	02/13/25 04:29	1
Perfluorodecanoic acid (PFDA)	<0.0030		0.0030	ug/L		02/12/25 10:26	02/13/25 04:29	1
Perfluoroundecanoic acid (PFUnA)	<0.0020		0.0020	ug/L		02/12/25 10:26	02/13/25 04:29	1
Perfluorododecanoic acid (PFDoA)	<0.0030		0.0030	ug/L		02/12/25 10:26	02/13/25 04:29	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0030		0.0030	ug/L		02/12/25 10:26	02/13/25 04:29	1
Perfluorobutanesulfonic acid (PFBS)	<0.0030		0.0030	ug/L		02/12/25 10:26	02/13/25 04:29	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0030		0.0030	ug/L		02/12/25 10:26	02/13/25 04:29	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0030		0.0030	ug/L		02/12/25 10:26	02/13/25 04:29	1
Perfluorooctanesulfonic acid (PFOS)	<0.0040		0.0040	ug/L		02/12/25 10:26	02/13/25 04:29	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0040		0.0040	ug/L		02/12/25 10:26	02/13/25 04:29	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0050		0.0050	ug/L		02/12/25 10:26	02/13/25 04:29	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<0.0020		0.0020	ug/L		02/12/25 10:26	02/13/25 04:29	1
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid	<0.0050		0.0050	ug/L		02/12/25 10:26	02/13/25 04:29	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0030		0.0030	ug/L		02/12/25 10:26	02/13/25 04:29	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0050		0.0050	ug/L		02/12/25 10:26	02/13/25 04:29	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0050		0.0050	ug/L		02/12/25 10:26	02/13/25 04:29	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0200		0.0200	ug/L		02/12/25 10:26	02/13/25 04:29	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0040		0.0040	ug/L		02/12/25 10:26	02/13/25 04:29	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0030		0.0030	ug/L		02/12/25 10:26	02/13/25 04:29	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.0030		0.0030	ug/L		02/12/25 10:26	02/13/25 04:29	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	88		50 - 200	02/12/25 10:26	02/13/25 04:29	1
13C4 PFBA	94		50 - 200	02/12/25 10:26	02/13/25 04:29	1
13C3 PFBS	99		50 - 200	02/12/25 10:26	02/13/25 04:29	1
13C5 PFPeA	103		50 - 200	02/12/25 10:26	02/13/25 04:29	1
13C5 PFHxA	92		50 - 200	02/12/25 10:26	02/13/25 04:29	1
13C4 PFHpA	92		50 - 200	02/12/25 10:26	02/13/25 04:29	1
13C8 PFOA	95		50 - 200	02/12/25 10:26	02/13/25 04:29	1
13C9 PFNA	89		50 - 200	02/12/25 10:26	02/13/25 04:29	1
13C6 PFDA	93		50 - 200	02/12/25 10:26	02/13/25 04:29	1
13C7 PFUnA	88		50 - 200	02/12/25 10:26	02/13/25 04:29	1
13C2 PFDoA	88		50 - 200	02/12/25 10:26	02/13/25 04:29	1
13C8 PFOS	95		50 - 200	02/12/25 10:26	02/13/25 04:29	1
13C3 PFHxS	97		50 - 200	02/12/25 10:26	02/13/25 04:29	1

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Client Sample Results

Client: City of Piqua
 Project/Site: UCMR5 - OH5501211 - SE1 - City of Piqua, OH

Job ID: 810-137433-1

Client Sample ID: 5562258/EP002/Treatment Plant (Piqua)

Lab Sample ID: 810-137433-1

Date Collected: 02/10/25 09:00

Matrix: Drinking Water

Date Received: 02/11/25 10:15

PWSID Number: OH5501211

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

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>			<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C2-4:2-FTS	111		50 - 200			02/12/25 10:26	02/13/25 04:29	1
13C2-6:2-FTS	105		50 - 200			02/12/25 10:26	02/13/25 04:29	1
13C2-8:2-FTS	97		50 - 200			02/12/25 10:26	02/13/25 04:29	1

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

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0050		0.0050	ug/L		02/12/25 11:06	02/13/25 19:04	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0060		0.0060	ug/L		02/12/25 11:06	02/13/25 19:04	1
Perfluorotetradecanoic acid (PFTA)	<0.0080		0.0080	ug/L		02/12/25 11:06	02/13/25 19:04	1
Perfluorotridecanoic acid (PFTrDA)	<0.0070		0.0070	ug/L		02/12/25 11:06	02/13/25 19:04	1

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>			<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
d5-NEtFOSAA	100		70 - 130			02/12/25 11:06	02/13/25 19:04	1
13C2 PFHxA	83		70 - 130			02/12/25 11:06	02/13/25 19:04	1
13C2 PFDA	90		70 - 130			02/12/25 11:06	02/13/25 19:04	1
13C3 HFPO-DA	81		70 - 130			02/12/25 11:06	02/13/25 19:04	1

Method: EPA 200.7 UCMR5 - Metals (ICP)

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Lithium	<9.00		9.00	ug/L		02/12/25 11:46	02/13/25 14:38	1

Surrogate Summary

Client: City of Piqua
Project/Site: UCMR5 - OH5501211 - SE1 - City of Piqua, OH

Job ID: 810-137433-1

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

Matrix: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	HFPODA (70-130)
810-137433-1	5562258/EP002/Treatment Plan	100	83	90	81
LLCS 810-132809/2-A	Lab Control Sample	100	94	90	88
MBL 810-132809/1-A	Method Blank	99	80	81	80

Surrogate Legend

d5NEFOS = d5-NEtFOSAA

PFHxA = 13C2 PFHxA

PFDA = 13C2 PFDA

HFPODA = 13C3 HFPO-DA

Isotope Dilution Summary

Client: City of Piqua
 Project/Site: UCMR5 - OH5501211 - SE1 - City of Piqua, OH

Job ID: 810-137433-1

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)
810-137433-1	5562258/EP002/Treatment Plan	88	94	99	103	92	92	95	89
LLCS 810-132793/2-A	Lab Control Sample	91	97	96	103	94	96	99	98
MBL 810-132793/1-A	Method Blank	90	94	98	100	91	89	98	93

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)
810-137433-1	5562258/EP002/Treatment Plan	93	88	88	95	97	111	105	97
LLCS 810-132793/2-A	Lab Control Sample	95	95	95	97	94	92	89	91
MBL 810-132793/1-A	Method Blank	96	90	93	96	95	90	89	90

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: City of Piqua
 Project/Site: UCMR5 - OH5501211 - SE1 - City of Piqua, OH

Job ID: 810-137433-1

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

Lab Sample ID: MBL 810-132793/1-A
Matrix: Drinking Water
Analysis Batch: 132856

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 132793

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	<0.0005		0.0050	ug/L		02/12/25 10:26	02/13/25 00:38	1
Perfluoropentanoic acid (PFPeA)	<0.0004		0.0030	ug/L		02/12/25 10:26	02/13/25 00:38	1
Perfluorohexanoic acid (PFHxA)	<0.0004		0.0030	ug/L		02/12/25 10:26	02/13/25 00:38	1
Perfluoroheptanoic acid (PFHpA)	0.0004	>M	0.0030	ug/L		02/12/25 10:26	02/13/25 00:38	1
Perfluorooctanoic acid (PFOA)	<0.0004		0.0040	ug/L		02/12/25 10:26	02/13/25 00:38	1
Perfluorononanoic acid (PFNA)	<0.0004		0.0040	ug/L		02/12/25 10:26	02/13/25 00:38	1
Perfluorodecanoic acid (PFDA)	<0.0004		0.0030	ug/L		02/12/25 10:26	02/13/25 00:38	1
Perfluoroundecanoic acid (PFUnA)	<0.0004		0.0020	ug/L		02/12/25 10:26	02/13/25 00:38	1
Perfluorododecanoic acid (PFDoA)	<0.0004		0.0030	ug/L		02/12/25 10:26	02/13/25 00:38	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0004		0.0030	ug/L		02/12/25 10:26	02/13/25 00:38	1
Perfluorobutanesulfonic acid (PFBS)	<0.0004		0.0030	ug/L		02/12/25 10:26	02/13/25 00:38	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0004		0.0030	ug/L		02/12/25 10:26	02/13/25 00:38	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.0004		0.0030	ug/L		02/12/25 10:26	02/13/25 00:38	1
Perfluorooctanesulfonic acid (PFOS)	<0.0004		0.0040	ug/L		02/12/25 10:26	02/13/25 00:38	1
Perfluoropentanesulfonic acid (PFPeS)	<0.0004		0.0040	ug/L		02/12/25 10:26	02/13/25 00:38	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0005		0.0050	ug/L		02/12/25 10:26	02/13/25 00:38	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<0.0005		0.0020	ug/L		02/12/25 10:26	02/13/25 00:38	1
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid	<0.0005		0.0050	ug/L		02/12/25 10:26	02/13/25 00:38	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.0006		0.0030	ug/L		02/12/25 10:26	02/13/25 00:38	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.0007		0.0050	ug/L		02/12/25 10:26	02/13/25 00:38	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.0006		0.0050	ug/L		02/12/25 10:26	02/13/25 00:38	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.0009		0.0200	ug/L		02/12/25 10:26	02/13/25 00:38	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.0003		0.0040	ug/L		02/12/25 10:26	02/13/25 00:38	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.0004		0.0030	ug/L		02/12/25 10:26	02/13/25 00:38	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.0005		0.0030	ug/L		02/12/25 10:26	02/13/25 00:38	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	90		50 - 200	02/12/25 10:26	02/13/25 00:38	1
13C4 PFBA	94		50 - 200	02/12/25 10:26	02/13/25 00:38	1
13C3 PFBS	98		50 - 200	02/12/25 10:26	02/13/25 00:38	1
13C5 PFPeA	100		50 - 200	02/12/25 10:26	02/13/25 00:38	1
13C5 PFHxA	91		50 - 200	02/12/25 10:26	02/13/25 00:38	1
13C4 PFHpA	89		50 - 200	02/12/25 10:26	02/13/25 00:38	1
13C8 PFOA	98		50 - 200	02/12/25 10:26	02/13/25 00:38	1
13C9 PFNA	93		50 - 200	02/12/25 10:26	02/13/25 00:38	1
13C6 PFDA	96		50 - 200	02/12/25 10:26	02/13/25 00:38	1
13C7 PFUnA	90		50 - 200	02/12/25 10:26	02/13/25 00:38	1
13C2 PFDoA	93		50 - 200	02/12/25 10:26	02/13/25 00:38	1
13C8 PFOS	96		50 - 200	02/12/25 10:26	02/13/25 00:38	1

Eurofins Eaton Analytical South Bend

QC Sample Results

Client: City of Piqua
 Project/Site: UCMR5 - OH5501211 - SE1 - City of Piqua, OH

Job ID: 810-137433-1

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

Lab Sample ID: MBL 810-132793/1-A
Matrix: Drinking Water
Analysis Batch: 132856

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 132793

Isotope Dilution	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C3 PFHxS	95		50 - 200	02/12/25 10:26	02/13/25 00:38	1
13C2-4:2-FTS	90		50 - 200	02/12/25 10:26	02/13/25 00:38	1
13C2-6:2-FTS	89		50 - 200	02/12/25 10:26	02/13/25 00:38	1
13C2-8:2-FTS	90		50 - 200	02/12/25 10:26	02/13/25 00:38	1

Lab Sample ID: LLCS 810-132793/2-A
Matrix: Drinking Water
Analysis Batch: 132856

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 132793

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec
							Limits
Perfluorobutanoic acid (PFBA)	0.00200	0.0018		ug/L		90	50 - 150
Perfluoropentanoic acid (PFPeA)	0.00200	0.0018		ug/L		92	50 - 150
Perfluorohexanoic acid (PFHxA)	0.00200	0.0018		ug/L		92	50 - 150
Perfluoroheptanoic acid (PFHpA)	0.00200	0.0021		ug/L		104	50 - 150
Perfluorooctanoic acid (PFOA)	0.00200	0.0018		ug/L		92	50 - 150
Perfluorononanoic acid (PFNA)	0.00200	0.0018		ug/L		89	50 - 150
Perfluorodecanoic acid (PFDA)	0.00200	0.0018		ug/L		92	50 - 150
Perfluoroundecanoic acid (PFUnA)	0.00200	0.0018		ug/L		88	50 - 150
Perfluorododecanoic acid (PFDoA)	0.00200	0.0018		ug/L		92	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.00189	0.0017		ug/L		91	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.00178	0.0015		ug/L		86	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.00183	0.0016		ug/L		88	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	0.00191	0.0016		ug/L		85	50 - 150
Perfluorooctanesulfonic acid (PFOS)	0.00186	0.0017		ug/L		92	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.00188	0.0017		ug/L		88	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	0.0016		ug/L		85	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.00189	0.0016		ug/L		86	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	0.00188	0.0016		ug/L		84	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	0.00190	0.0018		ug/L		94	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	0.00192	0.0016		ug/L		84	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.00200	0.0018		ug/L		90	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.00200	0.0020		ug/L		98	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.00200	0.0018		ug/L		90	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	0.00178	0.0015		ug/L		81	50 - 150

QC Sample Results

Client: City of Piqua
 Project/Site: UCMR5 - OH5501211 - SE1 - City of Piqua, OH

Job ID: 810-137433-1

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

Isotope Dilution	LLCS LLCS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	91		50 - 200
13C4 PFBA	97		50 - 200
13C3 PFBS	96		50 - 200
13C5 PFPeA	103		50 - 200
13C5 PFHxA	94		50 - 200
13C4 PFHpA	96		50 - 200
13C8 PFOA	99		50 - 200
13C9 PFNA	98		50 - 200
13C6 PFDA	95		50 - 200
13C7 PFUnA	95		50 - 200
13C2 PFDoA	95		50 - 200
13C8 PFOS	97		50 - 200
13C3 PFHxS	94		50 - 200
13C2-4:2-FTS	92		50 - 200
13C2-6:2-FTS	89		50 - 200
13C2-8:2-FTS	91		50 - 200

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

Lab Sample ID: MBL 810-132809/1-A
Matrix: Drinking Water
Analysis Batch: 132988

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 132809

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0007		0.0050	ug/L		02/12/25 11:06	02/13/25 17:39	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0006		0.0060	ug/L		02/12/25 11:06	02/13/25 17:39	1
Perfluorotetradecanoic acid (PFTA)	<0.0007		0.0080	ug/L		02/12/25 11:06	02/13/25 17:39	1
Perfluorotridecanoic acid (PFTrDA)	<0.0006		0.0070	ug/L		02/12/25 11:06	02/13/25 17:39	1

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	99		70 - 130	02/12/25 11:06	02/13/25 17:39	1
13C2 PFHxA	80		70 - 130	02/12/25 11:06	02/13/25 17:39	1
13C2 PFDA	81		70 - 130	02/12/25 11:06	02/13/25 17:39	1
13C3 HFPO-DA	80		70 - 130	02/12/25 11:06	02/13/25 17:39	1

Lab Sample ID: LLCS 810-132809/2-A
Matrix: Drinking Water
Analysis Batch: 132988

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 132809

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.00200	0.0018		ug/L		89	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.00200	0.0018		ug/L		88	50 - 150
Perfluorotetradecanoic acid (PFTA)	0.00200	0.0017		ug/L		87	50 - 150
Perfluorotridecanoic acid (PFTrDA)	0.00200	0.0016		ug/L		79	50 - 150

Surrogate	LLCS %Recovery	LLCS Qualifier	Limits
d5-NEtFOSAA	100		70 - 130

QC Sample Results

Client: City of Piqua
 Project/Site: UCMR5 - OH5501211 - SE1 - City of Piqua, OH

Job ID: 810-137433-1

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

Lab Sample ID: LLCS 810-132809/2-A
Matrix: Drinking Water
Analysis Batch: 132988

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 132809

Surrogate	LLCS		Limits
	%Recovery	Qualifier	
13C2 PFHxA	94		70 - 130
13C2 PFDA	90		70 - 130
13C3 HFPO-DA	88		70 - 130

Method: 200.7 UCMR5 - Metals (ICP)

Lab Sample ID: MBL 810-132832/1-A
Matrix: Drinking Water
Analysis Batch: 133050

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 132832

Analyte	MBL		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Lithium	<2.00		9.00	ug/L		02/12/25 11:46	02/13/25 14:23	1

Lab Sample ID: LLCS 810-132832/2-A
Matrix: Drinking Water
Analysis Batch: 133050

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 132832

Analyte	Spike Added	LLCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Lithium	9.00	8.44	J	ug/L		94	50 - 150

QC Association Summary

Client: City of Piqua
Project/Site: UCMR5 - OH5501211 - SE1 - City of Piqua, OH

Job ID: 810-137433-1

LCMS

Prep Batch: 132793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-137433-1	5562258/EP002/Treatment Plant (Piqua)	Total/NA	Drinking Water	533	
MBL 810-132793/1-A	Method Blank	Total/NA	Drinking Water	533	
LLCS 810-132793/2-A	Lab Control Sample	Total/NA	Drinking Water	533	

Prep Batch: 132809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-137433-1	5562258/EP002/Treatment Plant (Piqua)	Total/NA	Drinking Water	537.1 DW	
MBL 810-132809/1-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LLCS 810-132809/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 132856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-137433-1	5562258/EP002/Treatment Plant (Piqua)	Total/NA	Drinking Water	533	132793
MBL 810-132793/1-A	Method Blank	Total/NA	Drinking Water	533	132793
LLCS 810-132793/2-A	Lab Control Sample	Total/NA	Drinking Water	533	132793

Analysis Batch: 132988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-137433-1	5562258/EP002/Treatment Plant (Piqua)	Total/NA	Drinking Water	537.1 UCMR5	132809
MBL 810-132809/1-A	Method Blank	Total/NA	Drinking Water	537.1 UCMR5	132809
LLCS 810-132809/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 UCMR5	132809

Metals

Prep Batch: 132832

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-137433-1	5562258/EP002/Treatment Plant (Piqua)	Total/NA	Drinking Water	200.7 UCMR5	
MBL 810-132832/1-A	Method Blank	Total/NA	Drinking Water	200.7 UCMR5	
LLCS 810-132832/2-A	Lab Control Sample	Total/NA	Drinking Water	200.7 UCMR5	

Analysis Batch: 133050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-137433-1	5562258/EP002/Treatment Plant (Piqua)	Total/NA	Drinking Water	200.7 UCMR5	132832
MBL 810-132832/1-A	Method Blank	Total/NA	Drinking Water	200.7 UCMR5	132832
LLCS 810-132832/2-A	Lab Control Sample	Total/NA	Drinking Water	200.7 UCMR5	132832

Lab Chronicle

Client: City of Piqua
Project/Site: UCMR5 - OH5501211 - SE1 - City of Piqua, OH

Job ID: 810-137433-1

Client Sample ID: 5562258/EP002/Treatment Plant (Piqua)

Lab Sample ID: 810-137433-1

Date Collected: 02/10/25 09:00

Matrix: Drinking Water

Date Received: 02/11/25 10:15

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Prep	533			132793	MM	EA SB	02/12/25 10:26
Total/NA	Analysis	533		1	132856	MT	EA SB	02/13/25 04:29
Total/NA	Prep	537.1 DW			132809	KW	EA SB	02/12/25 11:06
Total/NA	Analysis	537.1 UCMR5		1	132988	PP	EA SB	02/13/25 19:04
Total/NA	Prep	200.7 UCMR5			132832	AC	EA SB	02/12/25 11:46
Total/NA	Analysis	200.7 UCMR5		1	133050	AC	EA SB	02/13/25 14:38

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: City of Piqua
Project/Site: UCMR5 - OH5501211 - SE1 - City of Piqua, OH

Job ID: 810-137433-1

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
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- 6
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Method Summary

Client: City of Piqua
Project/Site: UCMR5 - OH5501211 - SE1 - City of Piqua, OH

Job ID: 810-137433-1

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: City of Piqua
Project/Site: UCMR5 - OH5501211 - SE1 - City of Piqua, OH

Job ID: 810-137433-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
810-137433-1	5562258/EP002/Treatment Plant (Piqua)	Drinking Water	02/10/25 09:00	02/11/25 10:15	OH5501211

- 1
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9963

South Bend, IN

"UCMR 5 Sampling Form for Single Collection Site"

110 S Hill Street
South Bend, IN 46617
Phone (574) 233-4777; Phone (574) 233-8207

(Separate form is needed for each collection site)



Environment Testing America

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Company Contact: Todd Hone
Company Name: City of Piqua
Company Address: 9801 N. St. Rt. 66
Piqua OH 45356
Phone: 1-937-778-2090
Email: thone@piquaoh.gov
Purchase Order:

Lab PM(name): Pamela Brown
PM Email: Pamela.Brown@et.eurofinsus.com
EEA Project: 8100 9963

PWSID: OH5501211
FacID: 5562258
SPID: EP002
FacName: Treatment Plant (Piqua)
SPName: Ron Smith
Sampling Event: UCMRS

Water System Name: Piqua Municipal Water Plant
Collection Location: 9801 N. St. Rt. 66 Piqua OH 45356
Scheduled Collection Date: 2-10-25

Sampler Name (Print): Ron Smith

Date/Time Sampled: 2/10/25 0900

Client Storage temp, if > 2 days from collection:



810-137433 Chain of Custody

AREA BELOW FOR LAB USE ONLY

For UCMR 5 specific criteria see: REC-WI55108 Guidance Document for UCMR 5 Sample Receiving

Table with 10 columns: Method, Type, # Bot, Temp °C (10°C within 2 days of collection, 6°C for > 2 days) Initial / Corrected, pH* value, Ice: Wet / Blue, ✓ if receipt pH acceptable, ✓ if pH needs adjustment, Cl (P/A)**, Sample Comments, ✓ if sample is invalid. Includes handwritten data for various methods like 200.7, 533, 537.1.

* 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: 2-11-2025 1015

Login Sample Receipt Checklist

Client: City of Piqua

Job Number: 810-137433-1

Login Number: 137433

List Number: 1

Creator: Alfred, Robbin

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	