



ANALYTICAL REPORT

PREPARED FOR

Attn: Mike Lankford
Gadsden Water Works
515 Albert Rains Blvd
Gadsden, Alabama 35901

Generated 1/3/2024 8:00:33 AM

JOB DESCRIPTION

Gadsden PFAS

JOB NUMBER

810-87446-1

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: Gadsden Water Works
Project/Site: Gadsden PFAS

Job ID: 810-87446-1

Qualifiers

LCMS

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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: Gadsden Water Works
Project: Gadsden PFAS

Job ID: 810-87446-1

Job ID: 810-87446-1

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Job Narrative 810-87446-1

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 samples were received on 12/12/2023 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.6°C

PFAS

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

Detection Summary

Client: Gadsden Water Works
Project/Site: Gadsden PFAS

Job ID: 810-87446-1

Client Sample ID: Gadsden - RW

Lab Sample ID: 810-87446-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	0.000015		0.0000019	mg/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	0.000020		0.0000019	mg/L	1		537.1	Total/NA
Perfluorooctanoic acid (PFOA)	0.000021		0.0000019	mg/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.0000024		0.0000019	mg/L	1		537.1	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.000066		0.0000019	mg/L	1		537.1	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.0000074		0.0000019	mg/L	1		537.1	Total/NA

Client Sample ID: Gadsden - FW

Lab Sample ID: 810-87446-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	0.0000096		0.0000019	mg/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	0.000017		0.0000019	mg/L	1		537.1	Total/NA
Perfluorooctanoic acid (PFOA)	0.000013		0.0000019	mg/L	1		537.1	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.000054		0.0000019	mg/L	1		537.1	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.0000053		0.0000019	mg/L	1		537.1	Total/NA

Client Sample ID: FTB

Lab Sample ID: 810-87446-3

No Detections.

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: Gadsden Water Works
Project/Site: Gadsden PFAS

Job ID: 810-87446-1

Client Sample ID: Gadsden - RW

Lab Sample ID: 810-87446-1

Date Collected: 12/10/23 20:00

Matrix: Drinking Water

Date Received: 12/12/23 09:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.000015		0.0000019	mg/L		12/13/23 13:08	12/14/23 15:39	1
Perfluoroundecanoic acid (PFUnA)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 15:39	1
Perfluorohexanoic acid (PFHxA)	0.000020		0.0000019	mg/L		12/13/23 13:08	12/14/23 15:39	1
Perfluorododecanoic acid (PFDoA)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 15:39	1
Perfluorooctanoic acid (PFOA)	0.000021		0.0000019	mg/L		12/13/23 13:08	12/14/23 15:39	1
Perfluorodecanoic acid (PFDA)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 15:39	1
Perfluorohexanesulfonic acid (PFHxS)	0.000024		0.0000019	mg/L		12/13/23 13:08	12/14/23 15:39	1
Perfluorobutanesulfonic acid (PFBS)	0.000066		0.0000019	mg/L		12/13/23 13:08	12/14/23 15:39	1
Perfluoroheptanoic acid (PFHpA)	0.000074		0.0000019	mg/L		12/13/23 13:08	12/14/23 15:39	1
Perfluorononanoic acid (PFNA)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 15:39	1
Perfluorotetradecanoic acid (PFTeDA)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 15:39	1
Perfluorotridecanoic acid (PFTrDA)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 15:39	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 15:39	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 15:39	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 15:39	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 15:39	1
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 15:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 15:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C2 PFHxA	96		70 - 130			12/13/23 13:08	12/14/23 15:39	1
13C2 PFDA	92		70 - 130			12/13/23 13:08	12/14/23 15:39	1
13C3 HFPO-DA	90		70 - 130			12/13/23 13:08	12/14/23 15:39	1
d5-NEtFOSAA	79		70 - 130			12/13/23 13:08	12/14/23 15:39	1

Client Sample ID: Gadsden - FW

Lab Sample ID: 810-87446-2

Date Collected: 12/11/23 11:00

Matrix: Drinking Water

Date Received: 12/12/23 09:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	0.000096		0.0000019	mg/L		12/13/23 13:08	12/14/23 16:00	1
Perfluoroundecanoic acid (PFUnA)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 16:00	1
Perfluorohexanoic acid (PFHxA)	0.000017		0.0000019	mg/L		12/13/23 13:08	12/14/23 16:00	1
Perfluorododecanoic acid (PFDoA)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 16:00	1
Perfluorooctanoic acid (PFOA)	0.000013		0.0000019	mg/L		12/13/23 13:08	12/14/23 16:00	1
Perfluorodecanoic acid (PFDA)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 16:00	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 16:00	1
Perfluorobutanesulfonic acid (PFBS)	0.000054		0.0000019	mg/L		12/13/23 13:08	12/14/23 16:00	1
Perfluoroheptanoic acid (PFHpA)	0.000053		0.0000019	mg/L		12/13/23 13:08	12/14/23 16:00	1
Perfluorononanoic acid (PFNA)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 16:00	1
Perfluorotetradecanoic acid (PFTeDA)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 16:00	1

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Client Sample Results

Client: Gadsden Water Works
Project/Site: Gadsden PFAS

Job ID: 810-87446-1

Client Sample ID: Gadsden - FW

Lab Sample ID: 810-87446-2

Date Collected: 12/11/23 11:00

Matrix: Drinking Water

Date Received: 12/12/23 09:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotridecanoic acid (PFTrDA)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 16:00	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 16:00	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 16:00	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 16:00	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 16:00	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 16:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0000019		0.0000019	mg/L		12/13/23 13:08	12/14/23 16:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C2 PFHxA	97		70 - 130			12/13/23 13:08	12/14/23 16:00	1
13C2 PFDA	94		70 - 130			12/13/23 13:08	12/14/23 16:00	1
13C3 HFPO-DA	93		70 - 130			12/13/23 13:08	12/14/23 16:00	1
d5-NEtFOSAA	75		70 - 130			12/13/23 13:08	12/14/23 16:00	1

Client Sample ID: FTB

Lab Sample ID: 810-87446-3

Date Collected: 12/11/23 11:00

Matrix: Drinking Water

Date Received: 12/12/23 09:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	<0.0000019		0.0000019	mg/L		12/20/23 07:46	12/20/23 20:26	1
Perfluoroundecanoic acid (PFUnA)	<0.0000019		0.0000019	mg/L		12/20/23 07:46	12/20/23 20:26	1
Perfluorohexanoic acid (PFHxA)	<0.0000019		0.0000019	mg/L		12/20/23 07:46	12/20/23 20:26	1
Perfluorododecanoic acid (PFDoA)	<0.0000019		0.0000019	mg/L		12/20/23 07:46	12/20/23 20:26	1
Perfluorooctanoic acid (PFOA)	<0.0000019		0.0000019	mg/L		12/20/23 07:46	12/20/23 20:26	1
Perfluorodecanoic acid (PFDA)	<0.0000019		0.0000019	mg/L		12/20/23 07:46	12/20/23 20:26	1
Perfluorohexanesulfonic acid (PFHxS)	<0.0000019		0.0000019	mg/L		12/20/23 07:46	12/20/23 20:26	1
Perfluorobutanesulfonic acid (PFBS)	<0.0000019		0.0000019	mg/L		12/20/23 07:46	12/20/23 20:26	1
Perfluoroheptanoic acid (PFHpA)	<0.0000019		0.0000019	mg/L		12/20/23 07:46	12/20/23 20:26	1
Perfluorononanoic acid (PFNA)	<0.0000019		0.0000019	mg/L		12/20/23 07:46	12/20/23 20:26	1
Perfluorotetradecanoic acid (PFTeDA)	<0.0000019		0.0000019	mg/L		12/20/23 07:46	12/20/23 20:26	1
Perfluorotridecanoic acid (PFTrDA)	<0.0000019		0.0000019	mg/L		12/20/23 07:46	12/20/23 20:26	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0000019		0.0000019	mg/L		12/20/23 07:46	12/20/23 20:26	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0000019		0.0000019	mg/L		12/20/23 07:46	12/20/23 20:26	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0000019		0.0000019	mg/L		12/20/23 07:46	12/20/23 20:26	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0000019		0.0000019	mg/L		12/20/23 07:46	12/20/23 20:26	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0000019		0.0000019	mg/L		12/20/23 07:46	12/20/23 20:26	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0000019		0.0000019	mg/L		12/20/23 07:46	12/20/23 20:26	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C2 PFHxA	108		70 - 130			12/20/23 07:46	12/20/23 20:26	1

Eurofins Eaton Analytical South Bend

Client Sample Results

Client: Gadsden Water Works
Project/Site: Gadsden PFAS

Job ID: 810-87446-1

Client Sample ID: FTB

Lab Sample ID: 810-87446-3

Date Collected: 12/11/23 11:00

Matrix: Drinking Water

Date Received: 12/12/23 09:00

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

<u>Surrogate</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
13C2 PFDA	101		70 - 130	12/20/23 07:46	12/20/23 20:26	1
13C3 HFPO-DA	98		70 - 130	12/20/23 07:46	12/20/23 20:26	1
d5-NEtFOSAA	95		70 - 130	12/20/23 07:46	12/20/23 20:26	1

Surrogate Summary

Client: Gadsden Water Works
Project/Site: Gadsden PFAS

Job ID: 810-87446-1

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

Matrix: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFHxA	PFDA	HFPODA	d5NEFOS
		(70-130)	(70-130)	(70-130)	(70-130)
810-87446-1	Gadsden - RW	96	92	90	79
810-87446-2	Gadsden - FW	97	94	93	75
810-87446-3	FTB	108	101	98	95
LCS 810-82725/3-A	Lab Control Sample	104	98	101	97
LLCS 810-82725/2-A	Lab Control Sample	101	98	99	99
LLCS 810-83438/26-A	Lab Control Sample	109	103	106	106
MBL 810-82725/1-A	Method Blank	96	101	93	96
MBL 810-83438/25-A	Method Blank	97	101	97	96

Surrogate Legend

PFHxA = 13C2 PFHxA

PFDA = 13C2 PFDA

HFPODA = 13C3 HFPO-DA

d5NEFOS = d5-NEtFOSAA

QC Sample Results

Client: Gadsden Water Works
Project/Site: Gadsden PFAS

Job ID: 810-87446-1

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

Lab Sample ID: MBL 810-82725/1-A
Matrix: Drinking Water
Analysis Batch: 82824

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 82725

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	<0.00000053		0.0000020	mg/L		12/13/23 13:08	12/14/23 13:11	1
Perfluoroundecanoic acid (PFUnA)	<0.00000063		0.0000020	mg/L		12/13/23 13:08	12/14/23 13:11	1
Perfluorohexanoic acid (PFHxA)	<0.00000063		0.0000020	mg/L		12/13/23 13:08	12/14/23 13:11	1
Perfluorododecanoic acid (PFDoA)	<0.00000063		0.0000020	mg/L		12/13/23 13:08	12/14/23 13:11	1
Perfluorooctanoic acid (PFOA)	<0.00000050		0.0000020	mg/L		12/13/23 13:08	12/14/23 13:11	1
Perfluorodecanoic acid (PFDA)	<0.00000060		0.0000020	mg/L		12/13/23 13:08	12/14/23 13:11	1
Perfluorohexanesulfonic acid (PFHxS)	<0.00000044		0.0000020	mg/L		12/13/23 13:08	12/14/23 13:11	1
Perfluorobutanesulfonic acid (PFBS)	<0.00000071		0.0000020	mg/L		12/13/23 13:08	12/14/23 13:11	1
Perfluoroheptanoic acid (PFHpA)	<0.00000052		0.0000020	mg/L		12/13/23 13:08	12/14/23 13:11	1
Perfluorononanoic acid (PFNA)	<0.00000048		0.0000020	mg/L		12/13/23 13:08	12/14/23 13:11	1
Perfluorotetradecanoic acid (PFTeDA)	<0.00000065		0.0000020	mg/L		12/13/23 13:08	12/14/23 13:11	1
Perfluorotridecanoic acid (PFTrDA)	<0.00000060		0.0000020	mg/L		12/13/23 13:08	12/14/23 13:11	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.00000062		0.0000020	mg/L		12/13/23 13:08	12/14/23 13:11	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.00000051		0.0000020	mg/L		12/13/23 13:08	12/14/23 13:11	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.00000062		0.0000020	mg/L		12/13/23 13:08	12/14/23 13:11	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.00000064		0.0000020	mg/L		12/13/23 13:08	12/14/23 13:11	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.00000064		0.0000020	mg/L		12/13/23 13:08	12/14/23 13:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.00000049		0.0000020	mg/L		12/13/23 13:08	12/14/23 13:11	1
Surrogate	MBL %Recovery	MBL Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C2 PFHxA	96		70 - 130			12/13/23 13:08	12/14/23 13:11	1
13C2 PFDA	101		70 - 130			12/13/23 13:08	12/14/23 13:11	1
13C3 HFPO-DA	93		70 - 130			12/13/23 13:08	12/14/23 13:11	1
d5-NEtFOSAA	96		70 - 130			12/13/23 13:08	12/14/23 13:11	1

Lab Sample ID: LCS 810-82725/3-A
Matrix: Drinking Water
Analysis Batch: 82824

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 82725

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonic acid (PFOS)	0.000100	0.0000911		mg/L		91	70 - 130
Perfluoroundecanoic acid (PFUnA)	0.000100	0.0000907		mg/L		91	70 - 130
Perfluorohexanoic acid (PFHxA)	0.000100	0.0000981		mg/L		98	70 - 130
Perfluorododecanoic acid (PFDoA)	0.000100	0.0000935		mg/L		94	70 - 130
Perfluorooctanoic acid (PFOA)	0.000100	0.0000902		mg/L		90	70 - 130
Perfluorodecanoic acid (PFDA)	0.000100	0.0000954		mg/L		95	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	0.000100	0.0000956		mg/L		96	70 - 130
Perfluorobutanesulfonic acid (PFBS)	0.000100	0.0000992		mg/L		99	70 - 130
Perfluoroheptanoic acid (PFHpA)	0.000100	0.0000926		mg/L		93	70 - 130
Perfluorononanoic acid (PFNA)	0.000100	0.0000960		mg/L		96	70 - 130

Eurofins Eaton Analytical South Bend

QC Sample Results

Client: Gadsden Water Works
Project/Site: Gadsden PFAS

Job ID: 810-87446-1

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

Lab Sample ID: LCS 810-82725/3-A
Matrix: Drinking Water
Analysis Batch: 82824

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 82725

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorotetradecanoic acid (PFTeDA)	0.000100	0.0000821		mg/L		82	70 - 130
Perfluorotridecanoic acid (PFTTrDA)	0.000100	0.0000793		mg/L		79	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.000100	0.0000908		mg/L		91	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.000100	0.0000918		mg/L		92	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.000100	0.0000935		mg/L		93	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.000100	0.0000946		mg/L		95	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.000100	0.0000908		mg/L		91	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.000100	0.0000975		mg/L		97	70 - 130
LCS LCS							
Surrogate	%Recovery	Qualifier	Limits				
13C2 PFHxA	104		70 - 130				
13C2 PFDA	98		70 - 130				
13C3 HFPO-DA	101		70 - 130				
d5-NEtFOSAA	97		70 - 130				

Lab Sample ID: LLCS 810-82725/2-A
Matrix: Drinking Water
Analysis Batch: 82824

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 82725

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonic acid (PFOS)	0.0000020 0	0.00000195	J	mg/L		98	50 - 150
Perfluoroundecanoic acid (PFUnA)	0.0000020 0	0.00000213		mg/L		107	50 - 150
Perfluorohexanoic acid (PFHxA)	0.0000020 0	0.00000214		mg/L		107	50 - 150
Perfluorododecanoic acid (PFDoA)	0.0000020 0	0.00000195	J	mg/L		98	50 - 150
Perfluorooctanoic acid (PFOA)	0.0000020 0	0.00000190	J	mg/L		95	50 - 150
Perfluorodecanoic acid (PFDA)	0.0000020 0	0.00000208		mg/L		104	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.0000020 0	0.00000198	J	mg/L		99	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.0000020 0	0.00000199	J	mg/L		99	50 - 150
Perfluoroheptanoic acid (PFHpA)	0.0000020 0	0.00000213		mg/L		107	50 - 150
Perfluorononanoic acid (PFNA)	0.0000020 0	0.00000216		mg/L		108	50 - 150
Perfluorotetradecanoic acid (PFTeDA)	0.0000020 0	0.00000165	J	mg/L		83	50 - 150
Perfluorotridecanoic acid (PFTTrDA)	0.0000020 0	0.00000178	J	mg/L		89	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.0000020 0	0.00000194	J	mg/L		97	50 - 150

Eurofins Eaton Analytical South Bend

QC Sample Results

Client: Gadsden Water Works
Project/Site: Gadsden PFAS

Job ID: 810-87446-1

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

Lab Sample ID: LLCS 810-82725/2-A
Matrix: Drinking Water
Analysis Batch: 82824

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 82725

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamide doacetic acid (NEtFOSAA)	0.0000020	0.00000202		mg/L		101	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.0000020	0.00000194	J	mg/L		97	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.0000020	0.00000193	J	mg/L		97	50 - 150
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	0.0000020	0.00000177	J	mg/L		88	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.0000020	0.00000199	J	mg/L		100	50 - 150

Surrogate	LLCS %Recovery	LLCS Qualifier	Limits
13C2 PFHxA	101		70 - 130
13C2 PFDA	98		70 - 130
13C3 HFPO-DA	99		70 - 130
d5-NEtFOSAA	99		70 - 130

Lab Sample ID: MBL 810-83438/25-A
Matrix: Drinking Water
Analysis Batch: 83529

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 83438

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	<0.00000053		0.0000020	mg/L		12/20/23 07:46	12/20/23 19:12	1
Perfluoroundecanoic acid (PFUnA)	<0.00000063		0.0000020	mg/L		12/20/23 07:46	12/20/23 19:12	1
Perfluorohexanoic acid (PFHxA)	<0.00000063		0.0000020	mg/L		12/20/23 07:46	12/20/23 19:12	1
Perfluorododecanoic acid (PFDoA)	<0.00000063		0.0000020	mg/L		12/20/23 07:46	12/20/23 19:12	1
Perfluorooctanoic acid (PFOA)	<0.00000050		0.0000020	mg/L		12/20/23 07:46	12/20/23 19:12	1
Perfluorodecanoic acid (PFDA)	<0.00000060		0.0000020	mg/L		12/20/23 07:46	12/20/23 19:12	1
Perfluorohexanesulfonic acid (PFHxS)	<0.00000044		0.0000020	mg/L		12/20/23 07:46	12/20/23 19:12	1
Perfluorobutanesulfonic acid (PFBS)	<0.00000071		0.0000020	mg/L		12/20/23 07:46	12/20/23 19:12	1
Perfluoroheptanoic acid (PFHpA)	<0.00000052		0.0000020	mg/L		12/20/23 07:46	12/20/23 19:12	1
Perfluorononanoic acid (PFNA)	<0.00000048		0.0000020	mg/L		12/20/23 07:46	12/20/23 19:12	1
Perfluorotetradecanoic acid (PFTeDA)	<0.00000065		0.0000020	mg/L		12/20/23 07:46	12/20/23 19:12	1
Perfluorotridecanoic acid (PFTTrDA)	<0.00000060		0.0000020	mg/L		12/20/23 07:46	12/20/23 19:12	1
N-methylperfluorooctanesulfonamide doacetic acid (NMeFOSAA)	<0.00000062		0.0000020	mg/L		12/20/23 07:46	12/20/23 19:12	1
N-ethylperfluorooctanesulfonamide doacetic acid (NEtFOSAA)	<0.00000051		0.0000020	mg/L		12/20/23 07:46	12/20/23 19:12	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.00000062		0.0000020	mg/L		12/20/23 07:46	12/20/23 19:12	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.00000064		0.0000020	mg/L		12/20/23 07:46	12/20/23 19:12	1
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	<0.00000064		0.0000020	mg/L		12/20/23 07:46	12/20/23 19:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.00000049		0.0000020	mg/L		12/20/23 07:46	12/20/23 19:12	1

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	97		70 - 130	12/20/23 07:46	12/20/23 19:12	1
13C2 PFDA	101		70 - 130	12/20/23 07:46	12/20/23 19:12	1
13C3 HFPO-DA	97		70 - 130	12/20/23 07:46	12/20/23 19:12	1

Eurofins Eaton Analytical South Bend

QC Sample Results

Client: Gadsden Water Works
Project/Site: Gadsden PFAS

Job ID: 810-87446-1

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

Lab Sample ID: MBL 810-83438/25-A
Matrix: Drinking Water
Analysis Batch: 83529

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 83438

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	96		70 - 130	12/20/23 07:46	12/20/23 19:12	1

Lab Sample ID: LLCS 810-83438/26-A
Matrix: Drinking Water
Analysis Batch: 83529

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 83438

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonic acid (PFOS)	0.0000020	0.00000176	J	mg/L		88	50 - 150
Perfluoroundecanoic acid (PFUnA)	0.0000020	0.00000174	J	mg/L		87	50 - 150
Perfluorohexanoic acid (PFHxA)	0.0000020	0.00000190	J	mg/L		95	50 - 150
Perfluorododecanoic acid (PFDoA)	0.0000020	0.00000165	J	mg/L		82	50 - 150
Perfluorooctanoic acid (PFOA)	0.0000020	0.00000168	J	mg/L		84	50 - 150
Perfluorodecanoic acid (PFDA)	0.0000020	0.00000171	J	mg/L		86	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.0000020	0.00000177	J	mg/L		89	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.0000020	0.00000168	J	mg/L		84	50 - 150
Perfluoroheptanoic acid (PFHpA)	0.0000020	0.00000196	J	mg/L		98	50 - 150
Perfluorononanoic acid (PFNA)	0.0000020	0.00000186	J	mg/L		93	50 - 150
Perfluorotetradecanoic acid (PFTeDA)	0.0000020	0.00000155	J	mg/L		78	50 - 150
Perfluorotridecanoic acid (PFTTrDA)	0.0000020	0.00000168	J	mg/L		84	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.0000020	0.00000159	J	mg/L		80	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.0000020	0.00000165	J	mg/L		82	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.0000020	0.00000172	J	mg/L		86	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.0000020	0.00000161	J	mg/L		81	50 - 150
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid	0.0000020	0.00000156	J	mg/L		78	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.0000020	0.00000169	J	mg/L		85	50 - 150

Surrogate	%Recovery	Qualifier	Limits
13C2 PFHxA	109		70 - 130
13C2 PFDA	103		70 - 130
13C3 HFPO-DA	106		70 - 130
d5-NEtFOSAA	106		70 - 130

QC Association Summary

Client: Gadsden Water Works
Project/Site: Gadsden PFAS

Job ID: 810-87446-1

LCMS

Prep Batch: 82725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-87446-1	Gadsden - RW	Total/NA	Drinking Water	537.1 DW	
810-87446-2	Gadsden - FW	Total/NA	Drinking Water	537.1 DW	
MBL 810-82725/1-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LCS 810-82725/3-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	
LLCS 810-82725/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 82824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-87446-1	Gadsden - RW	Total/NA	Drinking Water	537.1	82725
810-87446-2	Gadsden - FW	Total/NA	Drinking Water	537.1	82725
MBL 810-82725/1-A	Method Blank	Total/NA	Drinking Water	537.1	82725
LCS 810-82725/3-A	Lab Control Sample	Total/NA	Drinking Water	537.1	82725
LLCS 810-82725/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1	82725

Prep Batch: 83438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-87446-3	FTB	Total/NA	Drinking Water	537.1 DW	
MBL 810-83438/25-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LLCS 810-83438/26-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 83529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-87446-3	FTB	Total/NA	Drinking Water	537.1	83438
MBL 810-83438/25-A	Method Blank	Total/NA	Drinking Water	537.1	83438
LLCS 810-83438/26-A	Lab Control Sample	Total/NA	Drinking Water	537.1	83438

Lab Chronicle

Client: Gadsden Water Works
Project/Site: Gadsden PFAS

Job ID: 810-87446-1

Client Sample ID: Gadsden - RW

Date Collected: 12/10/23 20:00

Date Received: 12/12/23 09:00

Lab Sample ID: 810-87446-1

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			82725	EH	EA SB	12/13/23 13:08
Total/NA	Analysis	537.1		1	82824	ST	EA SB	12/14/23 15:39

Client Sample ID: Gadsden - FW

Date Collected: 12/11/23 11:00

Date Received: 12/12/23 09:00

Lab Sample ID: 810-87446-2

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			82725	EH	EA SB	12/13/23 13:08
Total/NA	Analysis	537.1		1	82824	ST	EA SB	12/14/23 16:00

Client Sample ID: FTB

Date Collected: 12/11/23 11:00

Date Received: 12/12/23 09:00

Lab Sample ID: 810-87446-3

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			83438	AD	EA SB	12/20/23 07:46
Total/NA	Analysis	537.1		1	83529	ST	EA SB	12/20/23 20:26

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: Gadsden Water Works
Project/Site: Gadsden PFAS

Job ID: 810-87446-1

Laboratory: Eurofins Eaton Analytical South Bend

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

Authority	Program	Identification Number	Expiration Date
Alabama	State	40700	06-30-24

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Method Summary

Client: Gadsden Water Works
Project/Site: Gadsden PFAS

Job ID: 810-87446-1

Method	Method Description	Protocol	Laboratory
537.1	Perfluorinated Alkyl Acids (LC/MS)	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: Gadsden Water Works
Project/Site: Gadsden PFAS

Job ID: 810-87446-1

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Received</u>
810-87446-1	Gadsden - RW	Drinking Water	12/10/23 20:00	12/12/23 09:00
810-87446-2	Gadsden - FW	Drinking Water	12/11/23 11:00	12/12/23 09:00
810-87446-3	FTB	Drinking Water	12/11/23 11:00	12/12/23 09:00

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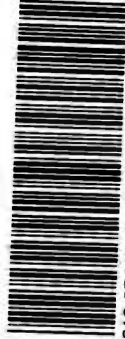
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Eurofins Eaton Analytical South Bend

110 S Hill Street
 South Bend, IN 46617
 Phone: 574-233-4777 Fax: 574-233-8207

Chain of Custody Record



810-87446 Chain of Custody

Sample: **MICHAEL BROOKS** Lab PM: Trowbridge, Nathan
 Client Contact: **MIKE LANKFORD** E-Mail: Nathan.Trowbridge@et.eurofinsus.com
 Phone: **(256) 543-2884**

Company: **Gadsden Water Works** PWSID
 Address: **515 Albert Rains Blvd**
 City: **Gadsden**
 State, Zip: **AL, 35901**
 Phone: **515 Albert Rains Blvd**
 Email: **mlankford@gadsdenwater.org**
 Project Name: **PFAS**
 Project #: **81004291**
 SSOW#: **GADSDEN**

Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Other)	Preservation Code	Field Filtered Sample (Yes or No)	Analysis Requested	Preservation Codes	Special Instructions/Note
	12/10	2000	G	Drinking Water	Y	X		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - Trizma Y - EDTA Z - other (specify)	Turbidity
	12/11	1100	G	Drinking Water					
				Drinking Water					
				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: **12/11** Date: **12/11** Time: **1200**
 Relinquished by: **M. Brooks to cooler** Date/Time: **12/11/23** Company: **Gadsden**
 Relinquished by: **Michael Brooks** Date/Time: **12/12/23** Company: **OCOS**
 Relinquished by: **Michael Brooks** Date/Time: **12/12/23** Company: **OCOS**

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



Login Sample Receipt Checklist

Client: Gadsden Water Works

Job Number: 810-87446-1

Login Number: 87446

List Number: 1

Creator: Trowbridge, Peyton

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	