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ANALYTICAL REPORT

PREPARED FOR

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

Generated 3/29/2023 8:08:16 AM

JOB DESCRIPTION

PFAS

JOB NUMBER

810-55269-1

Eurofins Eaton Analytical South Bend
110 S Hill Street
South Bend IN 46617

See page two for job notes and contact information.

Job Notes

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

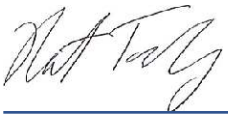

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Table of Contents

Definitions/Glossary

Client: Gadsden Water Works
Project/Site: PFAS

Job ID: 810-55269-1

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.
¤	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

Job ID: 810-55269-1

Laboratory: Eurofins Eaton Analytical South Bend

Narrative

Job Narrative
810-55269-1

Receipt
The samples were received on 3/3/2023 9:15 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 1.0°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: PFAS

Job ID: 810-55269-1

Client Sample ID: Gadsden RW
PWSID Number: AL0000577

Lab Sample ID: 810-55269-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	0.000032		0.0000020		mg/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	0.000023		0.0000020		mg/L	1		537.1	Total/NA
Perfluorooctanoic acid (PFOA)	0.000023		0.0000020		mg/L	1		537.1	Total/NA
Perfluorodecanoic acid (PFDA)	0.0000025		0.0000020		mg/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.0000030		0.0000020		mg/L	1		537.1	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.000088		0.0000020		mg/L	1		537.1	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.0000086		0.0000020		mg/L	1		537.1	Total/NA
Perfluorononanoic acid (PFNA)	0.0000022		0.0000020		mg/L	1		537.1	Total/NA

Client Sample ID: Gadsden FW
PWSID Number: AL0000577

Lab Sample ID: 810-55269-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanesulfonic acid (PFOS)	0.000025		0.0000019		mg/L	1		537.1	Total/NA
Perfluorohexanoic acid (PFHxA)	0.000023		0.0000019		mg/L	1		537.1	Total/NA
Perfluorooctanoic acid (PFOA)	0.000020		0.0000019		mg/L	1		537.1	Total/NA
Perfluorodecanoic acid (PFDA)	0.0000019		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)	0.000085		0.0000019		mg/L	1		537.1	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.0000078		0.0000019		mg/L	1		537.1	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: Gadsden RW

Lab Sample ID: 810-55269-1

Date Collected: 03/01/23 20:24
Matrix: Drinking Water
Date Received: 03/03/23 09:15
PWSID Number: AL0000577

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	**0.000032**		0.0000020		mg/L		03/13/23 08:04	03/13/23 23:13	1
Perfluoroundecanoic acid (PFUnA)	<0.0000020		0.0000020		mg/L		03/13/23 08:04	03/13/23 23:13	1
Perfluorohexanoic acid (PFHxA)	**0.000023**		0.0000020		mg/L		03/13/23 08:04	03/13/23 23:13	1
Perfluorododecanoic acid (PFDoA)	<0.0000020		0.0000020		mg/L		03/13/23 08:04	03/13/23 23:13	1
Perfluorooctanoic acid (PFOA)	**0.000023**		0.0000020		mg/L		03/13/23 08:04	03/13/23 23:13	1
Perfluorodecanoic acid (PFDA)	**0.0000025**		0.0000020		mg/L		03/13/23 08:04	03/13/23 23:13	1
Perfluorohexanesulfonic acid (PFHxS)	**0.0000030**		0.0000020		mg/L		03/13/23 08:04	03/13/23 23:13	1
Perfluorobutanesulfonic acid (PFBS)	**0.000088**		0.0000020		mg/L		03/13/23 08:04	03/13/23 23:13	1
Perfluoroheptanoic acid (PFHpA)	**0.0000086**		0.0000020		mg/L		03/13/23 08:04	03/13/23 23:13	1
Perfluorononanoic acid (PFNA)	**0.0000022**		0.0000020		mg/L		03/13/23 08:04	03/13/23 23:13	1
Perfluorotetradecanoic acid (PFTeDA)	<0.0000020		0.0000020		mg/L		03/13/23 08:04	03/13/23 23:13	1
Perfluorotridecanoic acid (PFTrDA)	<0.0000020		0.0000020		mg/L		03/13/23 08:04	03/13/23 23:13	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0000020		0.0000020		mg/L		03/13/23 08:04	03/13/23 23:13	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0000020		0.0000020		mg/L		03/13/23 08:04	03/13/23 23:13	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0000020		0.0000020		mg/L		03/13/23 08:04	03/13/23 23:13	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0000020		0.0000020		mg/L		03/13/23 08:04	03/13/23 23:13	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0000020		0.0000020		mg/L		03/13/23 08:04	03/13/23 23:13	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0000020		0.0000020		mg/L		03/13/23 08:04	03/13/23 23:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*97*		*70 - 130*	*03/13/23 08:04*	*03/13/23 23:13*	*1*
13C2 PFDA	*101*		*70 - 130*	*03/13/23 08:04*	*03/13/23 23:13*	*1*
13C3 HFPO-DA	*94*		*70 - 130*	*03/13/23 08:04*	*03/13/23 23:13*	*1*
d5-NEtFOSAA	*99*		*70 - 130*	*03/13/23 08:04*	*03/13/23 23:13*	*1*

Client Sample ID: Gadsden FW

Lab Sample ID: 810-55269-2

Date Collected: 03/02/23 11:00
Matrix: Drinking Water
Date Received: 03/03/23 09:15
PWSID Number: AL0000577

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	**0.000025**		0.0000019		mg/L		03/14/23 06:13	03/15/23 03:03	1
Perfluoroundecanoic acid (PFUnA)	<0.0000019		0.0000019		mg/L		03/14/23 06:13	03/15/23 03:03	1
Perfluorohexanoic acid (PFHxA)	**0.000023**		0.0000019		mg/L		03/14/23 06:13	03/15/23 03:03	1
Perfluorododecanoic acid (PFDoA)	<0.0000019		0.0000019		mg/L		03/14/23 06:13	03/15/23 03:03	1
Perfluorooctanoic acid (PFOA)	**0.000020**		0.0000019		mg/L		03/14/23 06:13	03/15/23 03:03	1
Perfluorodecanoic acid (PFDA)	**0.0000019**		0.0000019		mg/L		03/14/23 06:13	03/15/23 03:03	1
Perfluorohexanesulfonic acid (PFHxS)	**0.0000024**		0.0000019		mg/L		03/14/23 06:13	03/15/23 03:03	1
Perfluorobutanesulfonic acid (PFBS)	**0.000085**		0.0000019		mg/L		03/14/23 06:13	03/15/23 03:03	1
Perfluoroheptanoic acid (PFHpA)	**0.0000078**		0.0000019		mg/L		03/14/23 06:13	03/15/23 03:03	1
Perfluorononanoic acid (PFNA)	<0.0000019		0.0000019		mg/L		03/14/23 06:13	03/15/23 03:03	1

Client: Gadsden Water Works
Project/Site: PFAS

Job ID: 810-55269-1

Client Sample ID: Gadsden FW
Date Collected: 03/02/23 11:00
Date Received: 03/03/23 09:15

Lab Sample ID: 810-55269-2
Matrix: Drinking Water
PWSID Number: AL0000577

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotetradecanoic acid (PFTeDA)	<0.0000019		0.0000019		mg/L		03/14/23 06:13	03/15/23 03:03	1
Perfluorotridecanoic acid (PFTrDA)	<0.0000019		0.0000019		mg/L		03/14/23 06:13	03/15/23 03:03	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.0000019		0.0000019		mg/L		03/14/23 06:13	03/15/23 03:03	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.0000019		0.0000019		mg/L		03/14/23 06:13	03/15/23 03:03	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.0000019		0.0000019		mg/L		03/14/23 06:13	03/15/23 03:03	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.0000019		0.0000019		mg/L		03/14/23 06:13	03/15/23 03:03	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.0000019		0.0000019		mg/L		03/14/23 06:13	03/15/23 03:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.0000019		0.0000019		mg/L		03/14/23 06:13	03/15/23 03:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*101*		*70 - 130*	*03/14/23 06:13*	*03/15/23 03:03*	*1*
13C2 PFDA	*100*		*70 - 130*	*03/14/23 06:13*	*03/15/23 03:03*	*1*
13C3 HFPO-DA	*98*		*70 - 130*	*03/14/23 06:13*	*03/15/23 03:03*	*1*
d5-NEtFOSAA	*97*		*70 - 130*	*03/14/23 06:13*	*03/15/23 03:03*	*1*

Surrogate Summary

Client: Gadsden Water Works
Project/Site: PFAS

Job ID: 810-55269-1

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

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		PFHxA	PFDA	HFPODA	d5NEFOS
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
810-55269-1	Gadsden RW	97	101	94	99
810-55269-2	Gadsden FW	101	100	98	97
LCS 810-51474/3-A	Lab Control Sample	98	99	94	95
LLCS 810-51346/2-A	Lab Control Sample	96	100	92	98
LLCS 810-51474/2-A	Lab Control Sample	100	105	98	101
MBL 810-51346/1-A	Method Blank	101	102	97	92
MBL 810-51474/1-A	Method Blank	99	102	91	104

Surrogate Legend

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

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

Lab Sample ID: MBL 810-51346/1-A
Matrix: Drinking Water
Analysis Batch: 51423

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 51346

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	<0.00000053		0.0000020		mg/L		03/13/23 08:04	03/13/23 22:42	1
Perfluoroundecanoic acid (PFUnA)	<0.00000063		0.0000020		mg/L		03/13/23 08:04	03/13/23 22:42	1
Perfluorohexanoic acid (PFHxA)	<0.00000063		0.0000020		mg/L		03/13/23 08:04	03/13/23 22:42	1
Perfluorododecanoic acid (PFDoA)	<0.00000063		0.0000020		mg/L		03/13/23 08:04	03/13/23 22:42	1
Perfluorooctanoic acid (PFOA)	<0.00000050		0.0000020		mg/L		03/13/23 08:04	03/13/23 22:42	1
Perfluorodecanoic acid (PFDA)	<0.00000060		0.0000020		mg/L		03/13/23 08:04	03/13/23 22:42	1
Perfluorohexanesulfonic acid (PFHxS)	<0.00000044		0.0000020		mg/L		03/13/23 08:04	03/13/23 22:42	1
Perfluorobutanesulfonic acid (PFBS)	<0.00000071		0.0000020		mg/L		03/13/23 08:04	03/13/23 22:42	1
Perfluoroheptanoic acid (PFHpA)	<0.00000052		0.0000020		mg/L		03/13/23 08:04	03/13/23 22:42	1
Perfluorononanoic acid (PFNA)	<0.00000048		0.0000020		mg/L		03/13/23 08:04	03/13/23 22:42	1
Perfluorotetradecanoic acid (PFTeDA)	<0.00000065		0.0000020		mg/L		03/13/23 08:04	03/13/23 22:42	1
Perfluorotridecanoic acid (PFTrDA)	<0.00000060		0.0000020		mg/L		03/13/23 08:04	03/13/23 22:42	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.00000062		0.0000020		mg/L		03/13/23 08:04	03/13/23 22:42	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.00000051		0.0000020		mg/L		03/13/23 08:04	03/13/23 22:42	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.00000062		0.0000020		mg/L		03/13/23 08:04	03/13/23 22:42	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.00000064		0.0000020		mg/L		03/13/23 08:04	03/13/23 22:42	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.00000064		0.0000020		mg/L		03/13/23 08:04	03/13/23 22:42	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.00000049		0.0000020		mg/L		03/13/23 08:04	03/13/23 22:42	1

Surrogate	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*101*		*70 - 130*	*03/13/23 08:04*	*03/13/23 22:42*	*1*
13C2 PFDA	*102*		*70 - 130*	*03/13/23 08:04*	*03/13/23 22:42*	*1*
13C3 HFPO-DA	*97*		*70 - 130*	*03/13/23 08:04*	*03/13/23 22:42*	*1*
d5-NEtFOSAA	*92*		*70 - 130*	*03/13/23 08:04*	*03/13/23 22:42*	*1*

Lab Sample ID: LLCS 810-51346/2-A
Matrix: Drinking Water
Analysis Batch: 51423

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 51346

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonic acid (PFOS)	0.00000200	0.00000219		mg/L		110	50 - 150
Perfluoroundecanoic acid (PFUnA)	0.00000200	0.00000204		mg/L		102	50 - 150
Perfluorohexanoic acid (PFHxA)	0.00000200	0.00000205		mg/L		102	50 - 150
Perfluorododecanoic acid (PFDoA)	0.00000200	0.00000195	J	mg/L		97	50 - 150
Perfluorooctanoic acid (PFOA)	0.00000200	0.00000193	J	mg/L		97	50 - 150
Perfluorodecanoic acid (PFDA)	0.00000200	0.00000204		mg/L		102	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.00000200	0.00000208		mg/L		104	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.00000200	0.00000188	J	mg/L		94	50 - 150

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

Lab Sample ID: LLCS 810-51346/2-A
Matrix: Drinking Water
Analysis Batch: 51423

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 51346

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanoic acid (PFHpA)	0.00000200	0.00000215		mg/L		107	50 - 150
Perfluorononanoic acid (PFNA)	0.00000200	0.00000217		mg/L		108	50 - 150
Perfluorotetradecanoic acid (PFTeDA)	0.00000200	0.00000173	J	mg/L		87	50 - 150
Perfluorotridecanoic acid (PFTrDA)	0.00000200	0.00000190	J	mg/L		95	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.00000200	0.00000201		mg/L		100	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.00000200	0.00000217		mg/L		109	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.00000200	0.00000193	J	mg/L		97	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.00000200	0.00000196	J	mg/L		98	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.00000200	0.00000179	J	mg/L		90	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.00000200	0.00000210		mg/L		105	50 - 150

Surrogate	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C2 PFHxA	*96*		*70 - 130*
13C2 PFDA	*100*		*70 - 130*
13C3 HFPO-DA	*92*		*70 - 130*
d5-NEtFOSAA	*98*		*70 - 130*

Lab Sample ID: MBL 810-51474/1-A
Matrix: Drinking Water
Analysis Batch: 51577

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 51474

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	<0.00000053		0.0000020	mg/L		03/14/23 06:13	03/15/23 00:25	1
Perfluoroundecanoic acid (PFUnA)	<0.00000063		0.0000020	mg/L		03/14/23 06:13	03/15/23 00:25	1
Perfluorohexanoic acid (PFHxA)	<0.00000063		0.0000020	mg/L		03/14/23 06:13	03/15/23 00:25	1
Perfluorododecanoic acid (PFDoA)	<0.00000063		0.0000020	mg/L		03/14/23 06:13	03/15/23 00:25	1
Perfluorooctanoic acid (PFOA)	<0.00000050		0.0000020	mg/L		03/14/23 06:13	03/15/23 00:25	1
Perfluorodecanoic acid (PFDA)	<0.00000060		0.0000020	mg/L		03/14/23 06:13	03/15/23 00:25	1
Perfluorohexanesulfonic acid (PFHxS)	<0.00000044		0.0000020	mg/L		03/14/23 06:13	03/15/23 00:25	1
Perfluorobutanesulfonic acid (PFBS)	<0.00000071		0.0000020	mg/L		03/14/23 06:13	03/15/23 00:25	1
Perfluoroheptanoic acid (PFHpA)	<0.00000052		0.0000020	mg/L		03/14/23 06:13	03/15/23 00:25	1
Perfluorononanoic acid (PFNA)	<0.00000048		0.0000020	mg/L		03/14/23 06:13	03/15/23 00:25	1
Perfluorotetradecanoic acid (PFTeDA)	<0.00000065		0.0000020	mg/L		03/14/23 06:13	03/15/23 00:25	1
Perfluorotridecanoic acid (PFTrDA)	<0.00000060		0.0000020	mg/L		03/14/23 06:13	03/15/23 00:25	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.00000062		0.0000020	mg/L		03/14/23 06:13	03/15/23 00:25	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.00000051		0.0000020	mg/L		03/14/23 06:13	03/15/23 00:25	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<0.00000062		0.0000020	mg/L		03/14/23 06:13	03/15/23 00:25	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<0.00000064		0.0000020	mg/L		03/14/23 06:13	03/15/23 00:25	1

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

Lab Sample ID: MBL 810-51474/1-A
Matrix: Drinking Water
Analysis Batch: 51577

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 51474

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<0.00000064		0.0000020		mg/L		03/14/23 06:13	03/15/23 00:25	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.00000049		0.0000020		mg/L		03/14/23 06:13	03/15/23 00:25	1

Surrogate	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFHxA	*99*		*70 - 130*	*03/14/23 06:13*	*03/15/23 00:25*	*1*
13C2 PFDA	*102*		*70 - 130*	*03/14/23 06:13*	*03/15/23 00:25*	*1*
13C3 HFPO-DA	*91*		*70 - 130*	*03/14/23 06:13*	*03/15/23 00:25*	*1*
d5-NEtFOSAA	*104*		*70 - 130*	*03/14/23 06:13*	*03/15/23 00:25*	*1*

Lab Sample ID: LCS 810-51474/3-A
Matrix: Drinking Water
Analysis Batch: 51577

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 51474

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluorooctanesulfonic acid (PFOS)			0.000100	0.0000965		mg/L		97	70 - 130		
Perfluoroundecanoic acid (PFUnA)			0.000100	0.0000974		mg/L		97	70 - 130		
Perfluorohexanoic acid (PFHxA)			0.000100	0.0000990		mg/L		99	70 - 130		
Perfluorododecanoic acid (PFDoA)			0.000100	0.0000982		mg/L		98	70 - 130		
Perfluorooctanoic acid (PFOA)			0.000100	0.000101		mg/L		101	70 - 130		
Perfluorodecanoic acid (PFDA)			0.000100	0.0000973		mg/L		97	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)			0.000100	0.0000999		mg/L		100	70 - 130		
Perfluorobutanesulfonic acid (PFBS)			0.000100	0.0000869		mg/L		87	70 - 130		
Perfluoroheptanoic acid (PFHpA)			0.000100	0.000101		mg/L		101	70 - 130		
Perfluorononanoic acid (PFNA)			0.000100	0.000102		mg/L		102	70 - 130		
Perfluorotetradecanoic acid (PFTeDA)			0.000100	0.0000961		mg/L		96	70 - 130		
Perfluorotridecanoic acid (PFTrDA)			0.000100	0.0000946		mg/L		95	70 - 130		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			0.000100	0.0000934		mg/L		93	70 - 130		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			0.000100	0.0000951		mg/L		95	70 - 130		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)			0.000100	0.0000939		mg/L		94	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid			0.000100	0.0000921		mg/L		92	70 - 130		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid			0.000100	0.0000942		mg/L		94	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			0.000100	0.000104		mg/L		104	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C2 PFHxA	*98*		*70 - 130*
13C2 PFDA	*99*		*70 - 130*
13C3 HFPO-DA	*94*		*70 - 130*

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

Lab Sample ID: LCS 810-51474/3-A
Matrix: Drinking Water
Analysis Batch: 51577

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 51474

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
d5-NEtFOSAA	*95*		*70 - 130*

Lab Sample ID: LLCS 810-51474/2-A
Matrix: Drinking Water
Analysis Batch: 51577

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 51474

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonic acid (PFOS)	0.00000200	0.00000217		mg/L		109	50 - 150
Perfluoroundecanoic acid (PFUnA)	0.00000200	0.00000232		mg/L		116	50 - 150
Perfluorohexanoic acid (PFHxA)	0.00000200	0.00000226		mg/L		113	50 - 150
Perfluorododecanoic acid (PFDoA)	0.00000200	0.00000229		mg/L		115	50 - 150
Perfluorooctanoic acid (PFOA)	0.00000200	0.00000225		mg/L		112	50 - 150
Perfluorodecanoic acid (PFDA)	0.00000200	0.00000238		mg/L		119	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.00000200	0.00000216		mg/L		108	50 - 150
Perfluorobutanesulfonic acid (PFBS)	0.00000200	0.00000201		mg/L		100	50 - 150
Perfluoroheptanoic acid (PFHpA)	0.00000200	0.00000249		mg/L		125	50 - 150
Perfluorononanoic acid (PFNA)	0.00000200	0.00000240		mg/L		120	50 - 150
Perfluorotetradecanoic acid (PFTeDA)	0.00000200	0.00000230		mg/L		115	50 - 150
Perfluorotridecanoic acid (PFTrDA)	0.00000200	0.00000223		mg/L		112	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.00000200	0.00000211		mg/L		106	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.00000200	0.00000217		mg/L		109	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	0.00000200	0.00000209		mg/L		104	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	0.00000200	0.00000202		mg/L		101	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	0.00000200	0.00000199	J	mg/L		99	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.00000200	0.00000234		mg/L		117	50 - 150

Surrogate	*LLCS %Recovery*	*LLCS Qualifier*	*Limits*
13C2 PFHxA	*100*		*70 - 130*
13C2 PFDA	*105*		*70 - 130*
13C3 HFPO-DA	*98*		*70 - 130*
d5-NEtFOSAA	*101*		*70 - 130*

QC Association Summary

Client: Gadsden Water Works
Project/Site: PFAS

Job ID: 810-55269-1

LCMS

Prep Batch: 51346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-55269-1	Gadsden RW	Total/NA	Drinking Water	537.1 DW	
MBL 810-51346/1-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LLCS 810-51346/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 51423

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-55269-1	Gadsden RW	Total/NA	Drinking Water	537.1	51346
MBL 810-51346/1-A	Method Blank	Total/NA	Drinking Water	537.1	51346
LLCS 810-51346/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1	51346

Prep Batch: 51474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-55269-2	Gadsden FW	Total/NA	Drinking Water	537.1 DW	
MBL 810-51474/1-A	Method Blank	Total/NA	Drinking Water	537.1 DW	
LCS 810-51474/3-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	
LLCS 810-51474/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1 DW	

Analysis Batch: 51577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-55269-2	Gadsden FW	Total/NA	Drinking Water	537.1	51474
MBL 810-51474/1-A	Method Blank	Total/NA	Drinking Water	537.1	51474
LCS 810-51474/3-A	Lab Control Sample	Total/NA	Drinking Water	537.1	51474
LLCS 810-51474/2-A	Lab Control Sample	Total/NA	Drinking Water	537.1	51474

Lab Chronicle

Client: Gadsden Water Works
Project/Site: PFAS

Job ID: 810-55269-1

Client Sample ID: Gadsden RW

Lab Sample ID: 810-55269-1

Date Collected: 03/01/23 20:24

Matrix: Drinking Water

Date Received: 03/03/23 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			51346	AD	EA SB	03/13/23 08:04
Total/NA	Analysis	537.1		1	51423	MH	EA SB	03/13/23 23:13

Client Sample ID: Gadsden FW

Lab Sample ID: 810-55269-2

Date Collected: 03/02/23 11:00

Matrix: Drinking Water

Date Received: 03/03/23 09:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			51474	AD	EA SB	03/14/23 06:13
Total/NA	Analysis	537.1		1	51577	MH	EA SB	03/15/23 03:03

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: PFAS

Job ID: 810-55269-1

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	06-30-23

Method Summary

Client: Gadsden Water Works
Project/Site: PFAS

Job ID: 810-55269-1

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: PFAS

Job ID: 810-55269-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
810-55269-1	Gadsden RW	Drinking Water	03/01/23 20:24	03/03/23 09:15	AL0000577
810-55269-2	Gadsden FW	Drinking Water	03/02/23 11:00	03/03/23 09:15	AL0000577

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

Chain of Custody Record

810-55269 Chain of Custody

eurofins Environment Testing

3/29/2023

Client Information	Sampler: M. BROOKINS	Lab PM: Trowbridge, Nat...	COC No: 810-16701-5449.1
Client Contact: Mike Lankford	Phone: (256) 543-2884	E-Mail: Nathan.Trowbridge@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: Gadsden Water Works	PWSID:		Job #:
Address: 515 Albert Rains Blvd	Due Date Requested:		
City: Gadsden	TAT Requested (days):		
State, Zip: AL, 35901	Compliance Project: Δ Yes Δ No		
Phone:	PO #: Purchase Order not required		
Email: mlankford@gadsdenwater.org	WO #:		
Project Name: PFAS-533	Project #: 81004291		
Site: GADSDEN	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, 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, Y - Trizma, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	533 - Local Method	Total Number of containers
			Preservation Code:				N	
GADSDEN RW	3/1/23	2024	G	Drinking Wate	N	N		
GADSDEN FW	3/2/23	1100	G	Drinking Wate	N	N		
				Drinking Wate				
				Drinking Wate				

Turbidity 8

Special Instructions/Note:

*received 537.1 bottles preserved w/ Trizma for both samples

Initial Temp: 0.2
Corrected Temp: 1.0
Therm ID No.: 29
wet

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

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

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: M. Brookins to cooler	Date/Time: 3/2/23 1125	Company: GAdsden	Received by:	Date/Time: 3/3/23 0915	Company: EEA		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company		

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

Login Sample Receipt Checklist

Client: Gadsden Water Works

Job Number: 810-55269-1

Login Number: 55269
List Number: 1
Creator: Wojcik, Mary

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.	False	Refer to Job Narrative for details.
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	