

 **ANALYTICAL REPORT****PREPARED FOR**

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

Generated 6/19/2023 8:23:07 AM

**JOB DESCRIPTION**

PFAS

**JOB NUMBER**

810-62388-1

# Case Narrative

Client: Gadsden Water Works  
Project/Site: PFAS

Job ID: 810-62388-1

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## Job ID: 810-62388-1

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### Laboratory: Eurofins Eaton Analytical South Bend

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#### Narrative

#### Job Narrative 810-62388-1

#### Receipt

The samples were received on 5/9/2023 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 1.2°C

#### Receipt Exceptions

COC lists method 537.1, however containers for method 533 were received.

Gadsden-RW (810-62388-1) and Gadsden-FW (810-62388-2)

#### PFAS

Method 533: The low-level matrix spike (LMS) recoveries for preparation batch 810-60609 and analytical batch 810-60668 were outside control limits for one or more analytes. See QC Sample Results for detail. Perfluorobutanesulfonic acid (PFBS) recovery was 49%. Limit 50-150%. The spiking level is inappropriate for the native concentration of this analyte in the parent sample. Results are not affected.

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



# Client Sample Results

Client: Gadsden Water Works  
Project/Site: PFAS

Job ID: 810-62388-1

**Client Sample ID: Gadsden-RW**

**Lab Sample ID: 810-62388-1**

Date Collected: 05/04/23 20:34

Matrix: Drinking Water

Date Received: 05/09/23 09:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	13		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
Perfluoropentanoic acid (PFPeA)	38		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
Perfluorohexanoic acid (PFHxA)	25		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
Perfluoroheptanoic acid (PFHpA)	9.4		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
Perfluorooctanoic acid (PFOA)	27		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
Perfluorononanoic acid (PFNA)	2.8		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
Perfluorodecanoic acid (PFDA)	3.0		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
Perfluoroundecanoic acid (PFUnA)	<1.9		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
Perfluorododecanoic acid (PFDoA)	<1.9		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
Perfluorobutanesulfonic acid (PFBS)	110		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
Perfluoropentanesulfonic acid (PFPeS)	<1.9		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
Perfluorohexanesulfonic acid (PFHxS)	3.7		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
Perfluoroheptanesulfonic acid (PFHpS)	<1.9		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
Perfluorooctanesulfonic acid (PFOS)	35		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<1.9		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<1.9		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<1.9		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<1.9		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<1.9		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<1.9		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	<1.9		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	<1.9		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<1.9		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<1.9		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<1.9		1.9	ng/L		05/30/23 07:28	05/30/23 22:06	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C4 PFBA	81		50 - 200			05/30/23 07:28	05/30/23 22:06	1
13C5 PFPeA	106		50 - 200			05/30/23 07:28	05/30/23 22:06	1
13C5 PFHxA	87		50 - 200			05/30/23 07:28	05/30/23 22:06	1
13C4 PFHpA	80		50 - 200			05/30/23 07:28	05/30/23 22:06	1
13C8 PFOA	77		50 - 200			05/30/23 07:28	05/30/23 22:06	1
13C9 PFNA	78		50 - 200			05/30/23 07:28	05/30/23 22:06	1
13C6 PFDA	75		50 - 200			05/30/23 07:28	05/30/23 22:06	1
13C7 PFUnA	75		50 - 200			05/30/23 07:28	05/30/23 22:06	1
13C2 PFDoA	75		50 - 200			05/30/23 07:28	05/30/23 22:06	1
13C3 HFPO-DA	83		50 - 200			05/30/23 07:28	05/30/23 22:06	1
13C3 PFBS	90		50 - 200			05/30/23 07:28	05/30/23 22:06	1

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# Client Sample Results

Client: Gadsden Water Works  
Project/Site: PFAS

Job ID: 810-62388-1

## Client Sample ID: Gadsden-RW

Date Collected: 05/04/23 20:34

Date Received: 05/09/23 09:00

Lab Sample ID: 810-62388-1

Matrix: Drinking Water

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	86		50 - 200	05/30/23 07:28	05/30/23 22:06	1
13C2-4:2-FTS	131		50 - 200	05/30/23 07:28	05/30/23 22:06	1
13C2-6:2-FTS	100		50 - 200	05/30/23 07:28	05/30/23 22:06	1
13C2-8:2-FTS	98		50 - 200	05/30/23 07:28	05/30/23 22:06	1
13C3 PFHxS	88		50 - 200	05/30/23 07:28	05/30/23 22:06	1

## Client Sample ID: Gadsden-FW

Date Collected: 05/05/23 11:00

Date Received: 05/09/23 09:00

Lab Sample ID: 810-62388-2

Matrix: Drinking Water

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	15		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
Perfluoropentanoic acid (PFPeA)	42		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
Perfluorohexanoic acid (PFHxA)	27		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
Perfluoroheptanoic acid (PFHpA)	9.0		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
Perfluorooctanoic acid (PFOA)	22		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
Perfluorobutanesulfonic acid (PFBS)	110		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
Perfluorohexanesulfonic acid (PFHxS)	2.7		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
Perfluorooctanesulfonic acid (PFOS)	22		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	<2.0		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid	<2.0		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid	<2.0		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		05/30/23 07:28	05/30/23 23:13	1

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end

# Chain of Custody Record



810-62388 Chain of Custody

Client Contact: **Mike Lankford** Phone: **(256) 543-8884** Lab PM: **Nathan Towbridge, Nathan** Carrier Tracking No(s): **810-16703-5449\_1**

Company: **Gadsden Water Works** PWSID: **Nathan.Towbridge@eurofins.com** State of Origin: **Alabama** Page: **1 of 1**

Address: **515 Albert Rains Blvd** Due Date Requested: **5/5/23** Analysis Requested: **COC No**

City: **Gadsden** TAT Requested (days): **1** Job #

State, Zip: **AL, 35901** Compliance Project:  Yes  No

Phone: **PO #** Purchase Order not required

Email: **miankford@gadsdenwater.org** WO #

Project Name: **PFAS-533** Project #: **81004291**

Site: **GWWSB** SSGW#

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Overstool, etc.)	Preservation Code	Field Filtered Sample (Yes or No)	Analysis Requested	Preservation Codes:
GADSDEN - RW	5/4	2031	G	Drinking Water	NW	Y		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NH4SO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDTA 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)
GADSDEN - FW	5/5	1100	G	Drinking Water	NW	Y		
				Drinking Water				
				Drinking Water				

Special Instructions/Note: **Turbidity ID**

Field Filtered Sample (Yes or No): **537.1\_DW\_PREC - PFC18**

Total Number of containers: **2**

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

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

Empty Kit Relinquished by: **M. BROOKINS to cooler** Date: **5/5/23** Time: **1300**

Relinquished by: **M. BROOKINS to cooler** Date/Time: **5/5/23 1300** Company: **GWWSB**

Relinquished by: **Tracy Feltinghous** Date/Time: **05/09/23 0900** Company: **ETX**

Custody Seal Intact:  Yes  No

Received by: **Tracy Feltinghous** Date/Time: **05/09/23 0900** Company: **ETX**

Special Instructions/IOC Requirements: **Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**

Method of Shipment: **Return To Client**  Disposal By Lab  Archive For  Months

Cooler Temperature(s) °C and Other Remarks: **Initial Temp: 0.4**  
**Temperature Temp: 1.2**  
**W. Gun # 38424**

Relinquished by: **M. BROOKINS to cooler** Date/Time: **5/5/23 1300** Company: **GWWSB**

Relinquished by: **Tracy Feltinghous** Date/Time: **05/09/23 0900** Company: **ETX**

Custody Seal Intact:  Yes  No

Received by: **Tracy Feltinghous** Date/Time: **05/09/23 0900** Company: **ETX**

Cooler Temperature(s) °C and Other Remarks: **Initial Temp: 0.4**  
**Temperature Temp: 1.2**  
**W. Gun # 38424**





810-62388 Chain of Custody

end

# Chain of Custody Record



Uniform Contact  
Mike Lankford

Sampler  
Michael Brooks

Lab PM  
Trowbridge, Nathan

Carrier Tracking No(s)

COC No  
810-16703-5449.1

Company  
Gadsden Water Works

Phone  
72562543-8884

E-Mail  
Nathan.Trowbridge@et.eurofins.com

State of Origin

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Address  
515 Albert Rains Blvd

Due Date Requested:

Analysis Requested

City  
Gadsden

TAT Requested (days):

Job #

State, Zip  
AL, 35901

Compliance Project:  Yes  No

Preservation Codes:

Phone  
mlankford@gadsdenwater.org

Project #  
81004291

Project Name  
PFAS-533

Project Name  
PFAS-533

SSOW#

Project #  
81004291

Site  
GWWWSB

SSOW#

Project #  
81004291

### Sample Identification

Sample Date

Sample Time

Sample Type  
(G=Comp, G=grab)

Matrix  
(W=Water, S=solid, O=Other)

Field Filtered Sample (Yes or No)

Perform MS/MSD (Yes or No)

Total Number of containers

Special Instructions/Note:

GADSDEN - RW  
GADSDEN - FW

5/4  
5/5

2034  
1100

G  
G

Drinking Water  
Drinking Water

Y  
Y

Y  
Y

Y  
Y

Y  
Y

Y  
Y

Y  
Y

Y  
Y

Y  
Y

Y  
Y

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

Empty Kit Relinquished by

Date: 5/5/23

Time

Method of Shipment

Relinquished by  
M. BROOKINS to cooler

Date/Time: 5/5/23 1300

Company  
GWWWSB

Received by  
Fanny Pelting-Wilf

Date/Time: 05/09/23 0900

Company  
EPA

Relinquished by

Date/Time

Company

Received by

Date/Time

Company

Custody Seals Intact  
 Yes  No

Custody Seal No

Cooler Temperature(s) °C and Other Remarks