

# ANALYTICAL REPORT

## PREPARED FOR

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

Generated 12/28/2022 8:06:05 PM

## JOB DESCRIPTION

Gadsden PFAS Sampling

## JOB NUMBER

280-170097-1

## Case Narrative

Client: Gadsden Water Works  
Project/Site: Gadsden PFAS Sampling

Job ID: 280-170097-1

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Laboratory: Eurofins Denver

Narrative

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### CASE NARRATIVE

**Client: Gadsden Water Works**

**Project: Gadsden PFAS Sampling**

**Report Number: 280-170097-1**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

#### **RECEIPT**

The samples were received on 12/08/2022; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.6 C.

#### **PERFLUORINATED HYDROCARBONS (PFAS) MOD**

Samples Gadsden RW (280-170097-1) and Gadsden FW (280-170097-2) were analyzed for Perfluorinated Hydrocarbons (PFAS) MOD in accordance with 537 MOD. The samples were prepared on 12/14/2022 and analyzed on 12/18/2022.

The following samples in preparation batch 320-639751 were observed to have floating particulates present in the sample bottle Gadsden RW (280-170097-1).

During the solid phase extraction process, the following sample contained floating particulates which clogged the solid phase extraction column: Gadsden RW (280-170097-1).

No 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: Gadsden PFAS Sampling

Job ID: 280-170097-1

## Method: EPA 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: Gadsden RW

Date Collected: 12/05/22 21:15

Date Received: 12/08/22 09:20

Lab Sample ID: 280-170097-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	14		4.5	2.2	ng/L		12/14/22 06:03	12/18/22 20:25	1
Perfluorodecanoic acid (PFDA)	3.2		1.8	0.28	ng/L		12/14/22 06:03	12/18/22 20:25	1
Perfluorododecanoic acid (PFDoA)	0.50	U	1.8	0.50	ng/L		12/14/22 06:03	12/18/22 20:25	1
Perfluoroheptanoic acid (PFHpA)	9.0		1.8	0.23	ng/L		12/14/22 06:03	12/18/22 20:25	1
Perfluorohexanoic acid (PFHxA)	22		1.8	0.53	ng/L		12/14/22 06:03	12/18/22 20:25	1
Perfluorononanoic acid (PFNA)	2.5		1.8	0.24	ng/L		12/14/22 06:03	12/18/22 20:25	1
Perfluorooctanoic acid (PFOA)	26		1.8	0.77	ng/L		12/14/22 06:03	12/18/22 20:25	1
Perfluorooctane sulfonate (PFOS)	33		1.8	0.49	ng/L		12/14/22 06:03	12/18/22 20:25	1
Perfluoropentanoic acid (PFPA)	35		1.8	0.44	ng/L		12/14/22 06:03	12/18/22 20:25	1
Perfluorotetradecanoic acid (PFTeA)	0.66	U	1.8	0.66	ng/L		12/14/22 06:03	12/18/22 20:25	1
Perfluorotridecanoic acid (PFTriA)	1.2	U	1.8	1.2	ng/L		12/14/22 06:03	12/18/22 20:25	1
Perfluoroundecanoic acid (PFUnA)	1.0	U	1.8	1.0	ng/L		12/14/22 06:03	12/18/22 20:25	1
Perfluorobutanesulfonic acid (PFBS)	95		1.8	0.18	ng/L		12/14/22 06:03	12/18/22 20:25	1
Perfluorodecanesulfonic acid (PFDS)	0.29	U	1.8	0.29	ng/L		12/14/22 06:03	12/18/22 20:25	1
Perfluorohexanesulfonic acid (PFHxS)	4.0		1.8	0.52	ng/L		12/14/22 06:03	12/18/22 20:25	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	67		25 - 150	12/14/22 06:03	12/18/22 20:25	1
13C5 PFPeA	75		25 - 150	12/14/22 06:03	12/18/22 20:25	1
13C2 PFHxA	77		25 - 150	12/14/22 06:03	12/18/22 20:25	1
13C4 PFHpA	76		25 - 150	12/14/22 06:03	12/18/22 20:25	1
13C4 PFOA	68		25 - 150	12/14/22 06:03	12/18/22 20:25	1
13C5 PFNA	73		25 - 150	12/14/22 06:03	12/18/22 20:25	1
13C2 PFDA	74		25 - 150	12/14/22 06:03	12/18/22 20:25	1
13C2 PFUnA	78		25 - 150	12/14/22 06:03	12/18/22 20:25	1
13C2 PFDoA	85		25 - 150	12/14/22 06:03	12/18/22 20:25	1
13C2 PFTeDA	49		25 - 150	12/14/22 06:03	12/18/22 20:25	1
13C3 PFBS	77		25 - 150	12/14/22 06:03	12/18/22 20:25	1
18O2 PFHxS	75		25 - 150	12/14/22 06:03	12/18/22 20:25	1
13C4 PFOS	74		25 - 150	12/14/22 06:03	12/18/22 20:25	1

Client Sample ID: Gadsden FW

Date Collected: 12/06/22 11:00

Date Received: 12/08/22 09:20

Lab Sample ID: 280-170097-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	16		4.6	2.2	ng/L		12/14/22 06:03	12/18/22 20:35	1
Perfluorodecanoic acid (PFDA)	1.4	J	1.8	0.28	ng/L		12/14/22 06:03	12/18/22 20:35	1
Perfluorododecanoic acid (PFDoA)	0.50	U	1.8	0.50	ng/L		12/14/22 06:03	12/18/22 20:35	1
Perfluoroheptanoic acid (PFHpA)	4.9		1.8	0.23	ng/L		12/14/22 06:03	12/18/22 20:35	1
Perfluorohexanoic acid (PFHxA)	18		1.8	0.53	ng/L		12/14/22 06:03	12/18/22 20:35	1
Perfluorononanoic acid (PFNA)	1.1	J	1.8	0.25	ng/L		12/14/22 06:03	12/18/22 20:35	1
Perfluorooctanoic acid (PFOA)	12		1.8	0.78	ng/L		12/14/22 06:03	12/18/22 20:35	1
Perfluorooctane sulfonate (PFOS)	11		1.8	0.49	ng/L		12/14/22 06:03	12/18/22 20:35	1
Perfluoropentanoic acid (PFPA)	36		1.8	0.45	ng/L		12/14/22 06:03	12/18/22 20:35	1
Perfluorotetradecanoic acid (PFTeA)	0.67	U	1.8	0.67	ng/L		12/14/22 06:03	12/18/22 20:35	1
Perfluorotridecanoic acid (PFTriA)	1.2	U	1.8	1.2	ng/L		12/14/22 06:03	12/18/22 20:35	1
Perfluoroundecanoic acid (PFUnA)	1.0	U	1.8	1.0	ng/L		12/14/22 06:03	12/18/22 20:35	1
Perfluorobutanesulfonic acid (PFBS)	51		1.8	0.18	ng/L		12/14/22 06:03	12/18/22 20:35	1

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# Client Sample Results

Client: Gadsden Water Works  
 Project/Site: Gadsden PFAS Sampling

Job ID: 280-170097-1

## Method: EPA 537 (modified) - Fluorinated Alkyl Substances (Continued)

Client Sample ID: Gadsden FW  
 Date Collected: 12/06/22 11:00  
 Date Received: 12/08/22 09:20

Lab Sample ID: 280-170097-2  
 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanesulfonic acid (PFDS)	0.29	U	1.8	0.29	ng/L		12/14/22 06:03	12/18/22 20:35	1
Perfluorohexanesulfonic acid (PFHxS)	1.7	J	1.8	0.52	ng/L		12/14/22 06:03	12/18/22 20:35	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	90		25 - 150				12/14/22 06:03	12/18/22 20:35	1
13C5 PFPeA	105		25 - 150				12/14/22 06:03	12/18/22 20:35	1
13C2 PFHxA	98		25 - 150				12/14/22 06:03	12/18/22 20:35	1
13C4 PFHpA	101		25 - 150				12/14/22 06:03	12/18/22 20:35	1
13C4 PFOA	92		25 - 150				12/14/22 06:03	12/18/22 20:35	1
13C5 PFNA	96		25 - 150				12/14/22 06:03	12/18/22 20:35	1
13C2 PFDA	94		25 - 150				12/14/22 06:03	12/18/22 20:35	1
13C2 PFUnA	112		25 - 150				12/14/22 06:03	12/18/22 20:35	1
13C2 PFDoA	103		25 - 150				12/14/22 06:03	12/18/22 20:35	1
13C2 PFTeDA	89		25 - 150				12/14/22 06:03	12/18/22 20:35	1
13C3 PFBS	104		25 - 150				12/14/22 06:03	12/18/22 20:35	1
18O2 PFHxS	93		25 - 150				12/14/22 06:03	12/18/22 20:35	1
13C4 PFOS	91		25 - 150				12/14/22 06:03	12/18/22 20:35	1

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# Chain of Custody Record

<b>Client Information</b>		Lab Pkt: <b>Blenniulis, Dylan T.</b>		Carrier Tracking Note:	
Client Contact: <b>Mike Lankford</b>		E-Mail: <b>Dylan.Blenniulis@et.eurofinsus.com</b>		State of Origin:	
Company: <b>Gadsden Water Works</b>		PW/SID:		Job #:	
Address: <b>515 Albert Rains Blvd</b>		City: <b>Gadsden</b>		State: <b>AL</b>	
State, Zip: <b>AL, 35901</b>		Phone: <b>DEM# 6-0288</b>		Project #: <b>28020645</b>	
Email: <b>mlankford@gadsdenwater.org</b>		Site: <b>Gadsden PFAS Sampling</b>		SSOW#:	
Due Date Requested:		TAT Requested (days):		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Identification		Sample Date		Sample Time	
Gadsden RW		12/15		2:15 G	
Gadsden fw		12/16		1:00 G	
Sample Type (C=Comp, G=grab)		Preservation Code		Matrix (W=Water, S=Solid, O=Soil, A=Air)	
G		W		W	
G		W		W	
Total Number of Containers		Field Filtered Sample (Yes/No)		PFAS	
13		N		N	
Preservation Codes:		Special Instructions/Note:		280-170097 Chain of Custody	
A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Acetone H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		M - Hexane N - None O - AshNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecalhydrate U - Acetone V - NCAAA W - pH 4-5 X - other (specify)		TSC 13	
Possible Hazard Identification		Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab		<input type="checkbox"/> Archive For _____ Months	
Empty Kit Relinquished by:		Date/Time:		Method of Shipment:	
Relinquished by: <b>Michael Brookers to Coolers</b>		Date/Time: <b>12/16 1:00</b>		Relinquished by: <b>Michael Brookers</b>	
Relinquished by:		Date/Time:		Relinquished by:	
Relinquished by:		Date/Time:		Relinquished by:	
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No. <b>18785590</b>		Cooler Temperature(s) °C and Other Remarks: <b>0.6c</b>	