

ANALYTICAL REPORT

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Laboratory Job ID: 280-159579-1
Client Project/Site: Gadsden PFC Sampling

For:
Gadsden Water Works
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Gadsden, Alabama 35901

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Case Narrative

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

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Narrative

CASE NARRATIVE

Client: Gadsden Water Works

Project: Gadsden PFC Sampling

Report Number: 280-159579-1

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 03/10/2022; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 2.6 C.

PERFLUORINATED HYDROCARBONS (PFAS) MOD

Samples GADSDEN - RW (280-159579-1) and GADSDEN - FW (280-159579-2) were analyzed for Perfluorinated Hydrocarbons (PFAS) MOD in accordance with 537 MOD. The samples were prepared on 03/17/2022 and analyzed on 03/20/2022.

The method required MS/MSD could not be performed due to insufficient sample volume, however, a LCS/LCSD pair was analyzed to demonstrate method precision and accuracy.

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 PFC Sampling

Job ID: 280-159579-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: GADSDEN - RW

Date Collected: 03/08/22 20:20

Date Received: 03/10/22 09:50

Lab Sample ID: 280-159579-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11CI-PF3OUdS	0.30	U	1.9	0.30	ng/L		03/17/22 05:11	03/20/22 16:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.38	U	1.9	0.38	ng/L		03/17/22 05:11	03/20/22 16:39	1
9CI-PF3ONS	0.23	U	1.9	0.23	ng/L		03/17/22 05:11	03/20/22 16:39	1
HFPO-DA	1.4	U	3.8	1.4	ng/L		03/17/22 05:11	03/20/22 16:39	1
NEtFOSAA	1.2	U	4.7	1.2	ng/L		03/17/22 05:11	03/20/22 16:39	1
NMeFOSAA	1.1	J	4.7	1.1	ng/L		03/17/22 05:11	03/20/22 16:39	1
Perfluorobutanesulfonic acid (PFBS)	96		1.9	0.19	ng/L		03/17/22 05:11	03/20/22 16:39	1
Perfluorobutanoic acid (PFBA)	13		4.7	2.3	ng/L		03/17/22 05:11	03/20/22 16:39	1
Perfluorodecanoic acid (PFDA)	3.2		1.9	0.29	ng/L		03/17/22 05:11	03/20/22 16:39	1
Perfluorododecanoic acid (PFDoA)	0.52	U	1.9	0.52	ng/L		03/17/22 05:11	03/20/22 16:39	1
Perfluoroheptanoic acid (PFHpA)	8.7		1.9	0.24	ng/L		03/17/22 05:11	03/20/22 16:39	1
Perfluorohexanesulfonic acid (PFHxS)	3.3		1.9	0.54	ng/L		03/17/22 05:11	03/20/22 16:39	1
Perfluorohexanoic acid (PFHxA)	22		1.9	0.55	ng/L		03/17/22 05:11	03/20/22 16:39	1
Perfluorononanoic acid (PFNA)	2.6		1.9	0.26	ng/L		03/17/22 05:11	03/20/22 16:39	1
Perfluorooctanesulfonic acid (PFOS)	36		1.9	0.51	ng/L		03/17/22 05:11	03/20/22 16:39	1
Perfluorooctanoic acid (PFOA)	24		1.9	0.81	ng/L		03/17/22 05:11	03/20/22 16:39	1
Perfluorotetradecanoic acid (PFTA)	0.69	U	1.9	0.69	ng/L		03/17/22 05:11	03/20/22 16:39	1
Perfluorotridecanoic acid (PFTrDA)	1.2	U	1.9	1.2	ng/L		03/17/22 05:11	03/20/22 16:39	1
Perfluoroundecanoic acid (PFUnA)	1.0	U	1.9	1.0	ng/L		03/17/22 05:11	03/20/22 16:39	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	86		25 - 150	03/17/22 05:11	03/20/22 16:39	1
13C2 PFDoA	84		25 - 150	03/17/22 05:11	03/20/22 16:39	1
13C2 PFHxA	86		25 - 150	03/17/22 05:11	03/20/22 16:39	1
13C2 PFTrDA	63		25 - 150	03/17/22 05:11	03/20/22 16:39	1
13C2 PFUnA	88		25 - 150	03/17/22 05:11	03/20/22 16:39	1
13C3 HFPO-DA	80		25 - 150	03/17/22 05:11	03/20/22 16:39	1
13C3 PFBS	82		25 - 150	03/17/22 05:11	03/20/22 16:39	1
13C4 PFBA	64		25 - 150	03/17/22 05:11	03/20/22 16:39	1
13C4 PFHpA	87		25 - 150	03/17/22 05:11	03/20/22 16:39	1
13C4 PFOA	85		25 - 150	03/17/22 05:11	03/20/22 16:39	1
13C4 PFOS	84		25 - 150	03/17/22 05:11	03/20/22 16:39	1
13C5 PFNA	89		25 - 150	03/17/22 05:11	03/20/22 16:39	1
18O2 PFHxS	85		25 - 150	03/17/22 05:11	03/20/22 16:39	1
d3-NMeFOSAA	90		25 - 150	03/17/22 05:11	03/20/22 16:39	1
d5-NEtFOSAA	105		25 - 150	03/17/22 05:11	03/20/22 16:39	1

Client Sample ID: GADSDEN - FW

Date Collected: 03/09/22 11:00

Date Received: 03/10/22 09:50

Lab Sample ID: 280-159579-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
11CI-PF3OUdS	0.30	U	1.9	0.30	ng/L		03/17/22 05:11	03/20/22 16:49	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.38	U	1.9	0.38	ng/L		03/17/22 05:11	03/20/22 16:49	1
9CI-PF3ONS	0.23	U	1.9	0.23	ng/L		03/17/22 05:11	03/20/22 16:49	1
HFPO-DA	1.4	U	3.8	1.4	ng/L		03/17/22 05:11	03/20/22 16:49	1
NEtFOSAA	1.2	U	4.7	1.2	ng/L		03/17/22 05:11	03/20/22 16:49	1
NMeFOSAA	1.1	U	4.7	1.1	ng/L		03/17/22 05:11	03/20/22 16:49	1

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Client Sample Results

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

Job ID: 280-159579-1

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

Client Sample ID: GADSDEN - FW

Date Collected: 03/09/22 11:00

Date Received: 03/10/22 09:50

Lab Sample ID: 280-159579-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	68		1.9	0.19	ng/L		03/17/22 05:11	03/20/22 16:49	1
Perfluorobutanoic acid (PFBA)	15		4.7	2.3	ng/L		03/17/22 05:11	03/20/22 16:49	1
Perfluorodecanoic acid (PFDA)	2.1		1.9	0.29	ng/L		03/17/22 05:11	03/20/22 16:49	1
Perfluorododecanoic acid (PFDoA)	0.52	U	1.9	0.52	ng/L		03/17/22 05:11	03/20/22 16:49	1
Perfluoroheptanoic acid (PFHpA)	5.8		1.9	0.23	ng/L		03/17/22 05:11	03/20/22 16:49	1
Perfluorohexanesulfonic acid (PFHxS)	1.8	J	1.9	0.53	ng/L		03/17/22 05:11	03/20/22 16:49	1
Perfluorohexanoic acid (PFHxA)	18		1.9	0.54	ng/L		03/17/22 05:11	03/20/22 16:49	1
Perfluorononanoic acid (PFNA)	1.5	J	1.9	0.25	ng/L		03/17/22 05:11	03/20/22 16:49	1
Perfluorooctanesulfonic acid (PFOS)	18		1.9	0.51	ng/L		03/17/22 05:11	03/20/22 16:49	1
Perfluorooctanoic acid (PFOA)	14		1.9	0.80	ng/L		03/17/22 05:11	03/20/22 16:49	1
Perfluorotetradecanoic acid (PFTA)	0.69	U	1.9	0.69	ng/L		03/17/22 05:11	03/20/22 16:49	1
Perfluorotridecanoic acid (PFTrDA)	1.2	U	1.9	1.2	ng/L		03/17/22 05:11	03/20/22 16:49	1
Perfluoroundecanoic acid (PFUnA)	1.0	U	1.9	1.0	ng/L		03/17/22 05:11	03/20/22 16:49	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
¹³ C2 PFDA	80		25 - 150				03/17/22 05:11	03/20/22 16:49	1
¹³ C2 PFDoA	77		25 - 150				03/17/22 05:11	03/20/22 16:49	1
¹³ C2 PFHxA	84		25 - 150				03/17/22 05:11	03/20/22 16:49	1
¹³ C2 PFTeDA	76		25 - 150				03/17/22 05:11	03/20/22 16:49	1
¹³ C2 PFUnA	81		25 - 150				03/17/22 05:11	03/20/22 16:49	1
¹³ C3 HFPO-DA	76		25 - 150				03/17/22 05:11	03/20/22 16:49	1
¹³ C3 PFBS	76		25 - 150				03/17/22 05:11	03/20/22 16:49	1
¹³ C4 PFBA	76		25 - 150				03/17/22 05:11	03/20/22 16:49	1
¹³ C4 PFHpA	83		25 - 150				03/17/22 05:11	03/20/22 16:49	1
¹³ C4 PFOA	81		25 - 150				03/17/22 05:11	03/20/22 16:49	1
¹³ C4 PFOS	85		25 - 150				03/17/22 05:11	03/20/22 16:49	1
¹³ C5 PFNA	80		25 - 150				03/17/22 05:11	03/20/22 16:49	1
¹⁸ O2 PFHxS	86		25 - 150				03/17/22 05:11	03/20/22 16:49	1
d3-NMeFOSAA	82		25 - 150				03/17/22 05:11	03/20/22 16:49	1
d5-NEtFOSAA	92		25 - 150				03/17/22 05:11	03/20/22 16:49	1

Login Sample Receipt Checklist

Client: Gadsden Water Works

Job Number: 280-159579-1

Login Number: 159579

List Source: Eurofins Denver

List Number: 1

Creator: Roehsner, Karen P

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	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	
Is the Field Sampler's name present on COC?	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	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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