

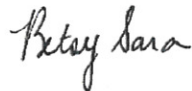
ANALYTICAL REPORT

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Laboratory Job ID: 280-142130-1
Client Project/Site: Gadsden PFC Sampling

For:
Gadsden Water Works
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Gadsden, Alabama 35901

Attn: Mike Lankford



Authorized for release by:
11/5/2020 3:21:06 PM

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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: 280-142130-1

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 10/29/2020 9:53 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.5° C.

PERFLUORINATED HYDROCARBONS (PFC)

Samples GADSDEN-RAW (280-142130-1), GADSDEN-FW (280-142130-2) and GADSDEN-DISCHARGE GAC (280-142130-3) were analyzed for Perfluorinated Hydrocarbons (PFC) in accordance with SOP DV-LC-0012. The samples were prepared on 11/02/2020 and analyzed on 11/03/2020.

Method DV-LC-0012: The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method recommended limit: GADSDEN-RAW (280-142130-1), GADSDEN-FW (280-142130-2), GADSDEN-DISCHARGE GAC (280-142130-3), (LCS 280-515004/2-A) and (LCSD 280-515004/3-A). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s). Preparation batch 280-515004 and analytical batch 280-515328 PFC.

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 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 PFC Sampling

Job ID: 280-142130-1

Client Sample ID: GADSDEN-RAW

Lab Sample ID: 280-142130-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.022		0.016	0.0081	ug/L	1		DV-LC-0012	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.013	J	0.025	0.011	ug/L	1		DV-LC-0012	Total/NA
Perfluorohexanoic acid (PFHxA)	0.039		0.016	0.0065	ug/L	1		DV-LC-0012	Total/NA
Perfluorooctanoic acid (PFOA)	0.032		0.016	0.0080	ug/L	1		DV-LC-0012	Total/NA
Perfluorooctane sulfonate (PFOS)	0.052		0.025	0.011	ug/L	1		DV-LC-0012	Total/NA
Perfluoropentanoic acid (PFPA)	0.068		0.025	0.0090	ug/L	1		DV-LC-0012	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.17		0.016	0.0068	ug/L	1		DV-LC-0012	Total/NA

Client Sample ID: GADSDEN-FW

Lab Sample ID: 280-142130-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.025		0.016	0.0078	ug/L	1		DV-LC-0012	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.013	J	0.024	0.011	ug/L	1		DV-LC-0012	Total/NA
Perfluorohexanoic acid (PFHxA)	0.044		0.016	0.0063	ug/L	1		DV-LC-0012	Total/NA
Perfluorooctanoic acid (PFOA)	0.026		0.016	0.0078	ug/L	1		DV-LC-0012	Total/NA
Perfluorooctane sulfonate (PFOS)	0.021	J	0.024	0.011	ug/L	1		DV-LC-0012	Total/NA
Perfluoropentanoic acid (PFPA)	0.076		0.024	0.0087	ug/L	1		DV-LC-0012	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.17		0.016	0.0066	ug/L	1		DV-LC-0012	Total/NA

Client Sample ID: GADSDEN-DISCHARGE GAC

Lab Sample ID: 280-142130-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.022		0.017	0.0082	ug/L	1		DV-LC-0012	Total/NA
Perfluorodecanoic acid (PFDA)	0.010	J	0.017	0.0065	ug/L	1		DV-LC-0012	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.015	J	0.025	0.011	ug/L	1		DV-LC-0012	Total/NA
Perfluorohexanoic acid (PFHxA)	0.056		0.017	0.0066	ug/L	1		DV-LC-0012	Total/NA
Perfluorooctanoic acid (PFOA)	0.037		0.017	0.0081	ug/L	1		DV-LC-0012	Total/NA
Perfluorooctane sulfonate (PFOS)	0.024	J	0.025	0.011	ug/L	1		DV-LC-0012	Total/NA
Perfluoropentanoic acid (PFPA)	0.078		0.025	0.0091	ug/L	1		DV-LC-0012	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.13		0.017	0.0069	ug/L	1		DV-LC-0012	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver



Client Sample Results

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

Job ID: 280-142130-1

Method: DV-LC-0012 - Fluorinated Alkyl Substances

Client Sample ID: GADSDEN-RAW						Lab Sample ID: 280-142130-1			
Date Collected: 10/27/20 21:17						Matrix: Water			
Date Received: 10/29/20 09:53									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.022		0.016	0.0081	ug/L		11/02/20 07:28	11/03/20 16:22	1
Perfluorodecanoic acid (PFDA)	0.0064	U	0.016	0.0064	ug/L		11/02/20 07:28	11/03/20 16:22	1
Perfluorododecanoic acid (PFDoA)	0.012	U	0.025	0.012	ug/L		11/02/20 07:28	11/03/20 16:22	1
Perfluoroheptanoic acid (PFHpA)	0.013	J	0.025	0.011	ug/L		11/02/20 07:28	11/03/20 16:22	1
Perfluorohexanoic acid (PFHxA)	0.039		0.016	0.0065	ug/L		11/02/20 07:28	11/03/20 16:22	1
Perfluorononanoic acid (PFNA)	0.0062	U	0.033	0.0062	ug/L		11/02/20 07:28	11/03/20 16:22	1
Perfluorooctanoic acid (PFOA)	0.032		0.016	0.0080	ug/L		11/02/20 07:28	11/03/20 16:22	1
Perfluorooctane sulfonate (PFOS)	0.052		0.025	0.011	ug/L		11/02/20 07:28	11/03/20 16:22	1
Perfluoropentanoic acid (PFPA)	0.068		0.025	0.0090	ug/L		11/02/20 07:28	11/03/20 16:22	1
Perfluorotetradecanoic acid (PFTeA)	0.012	U	0.025	0.012	ug/L		11/02/20 07:28	11/03/20 16:22	1
Perfluorotridecanoic acid (PFTriA)	0.015	U	0.033	0.015	ug/L		11/02/20 07:28	11/03/20 16:22	1
Perfluoroundecanoic acid (PFUnA)	0.0057	U	0.016	0.0057	ug/L		11/02/20 07:28	11/03/20 16:22	1
Perfluorobutanesulfonic acid (PFBS)	0.17		0.016	0.0068	ug/L		11/02/20 07:28	11/03/20 16:22	1
Perfluorodecanesulfonic acid (PFDS)	0.0075	U	0.016	0.0075	ug/L		11/02/20 07:28	11/03/20 16:22	1
Perfluorohexanesulfonic acid (PFHxS)	0.0057	U	0.025	0.0057	ug/L		11/02/20 07:28	11/03/20 16:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 PFOA	104		60 - 155				11/02/20 07:28	11/03/20 16:22	1
13C8 PFOS	98		45 - 130				11/02/20 07:28	11/03/20 16:22	1

Client Sample ID: GADSDEN-FW						Lab Sample ID: 280-142130-2			
Date Collected: 10/28/20 11:00						Matrix: Water			
Date Received: 10/29/20 09:53									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.025		0.016	0.0078	ug/L		11/02/20 07:28	11/03/20 16:31	1
Perfluorodecanoic acid (PFDA)	0.0063	U	0.016	0.0063	ug/L		11/02/20 07:28	11/03/20 16:31	1
Perfluorododecanoic acid (PFDoA)	0.012	U	0.024	0.012	ug/L		11/02/20 07:28	11/03/20 16:31	1
Perfluoroheptanoic acid (PFHpA)	0.013	J	0.024	0.011	ug/L		11/02/20 07:28	11/03/20 16:31	1
Perfluorohexanoic acid (PFHxA)	0.044		0.016	0.0063	ug/L		11/02/20 07:28	11/03/20 16:31	1
Perfluorononanoic acid (PFNA)	0.0060	U	0.032	0.0060	ug/L		11/02/20 07:28	11/03/20 16:31	1
Perfluorooctanoic acid (PFOA)	0.026		0.016	0.0078	ug/L		11/02/20 07:28	11/03/20 16:31	1
Perfluorooctane sulfonate (PFOS)	0.021	J	0.024	0.011	ug/L		11/02/20 07:28	11/03/20 16:31	1
Perfluoropentanoic acid (PFPA)	0.076		0.024	0.0087	ug/L		11/02/20 07:28	11/03/20 16:31	1
Perfluorotetradecanoic acid (PFTeA)	0.012	U	0.024	0.012	ug/L		11/02/20 07:28	11/03/20 16:31	1
Perfluorotridecanoic acid (PFTriA)	0.014	U	0.032	0.014	ug/L		11/02/20 07:28	11/03/20 16:31	1
Perfluoroundecanoic acid (PFUnA)	0.0055	U	0.016	0.0055	ug/L		11/02/20 07:28	11/03/20 16:31	1
Perfluorobutanesulfonic acid (PFBS)	0.17		0.016	0.0066	ug/L		11/02/20 07:28	11/03/20 16:31	1
Perfluorodecanesulfonic acid (PFDS)	0.0073	U	0.016	0.0073	ug/L		11/02/20 07:28	11/03/20 16:31	1
Perfluorohexanesulfonic acid (PFHxS)	0.0056	U	0.024	0.0056	ug/L		11/02/20 07:28	11/03/20 16:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 PFOA	106		60 - 155				11/02/20 07:28	11/03/20 16:31	1
13C8 PFOS	97		45 - 130				11/02/20 07:28	11/03/20 16:31	1

Client Sample ID: GADSDEN-DISCHARGE GAC						Lab Sample ID: 280-142130-3			
Date Collected: 10/22/20 15:00						Matrix: Water			
Date Received: 10/29/20 09:53									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	0.022		0.017	0.0082	ug/L		11/02/20 07:28	11/03/20 16:40	1

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Client Sample Results

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

Job ID: 280-142130-1

Method: DV-LC-0012 - Fluorinated Alkyl Substances (Continued)

Client Sample ID: GADSDEN-DISCHARGE GAC						Lab Sample ID: 280-142130-3			
Date Collected: 10/22/20 15:00						Matrix: Water			
Date Received: 10/29/20 09:53									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	0.010	J	0.017	0.0065	ug/L		11/02/20 07:28	11/03/20 16:40	1
Perfluorododecanoic acid (PFDoA)	0.012	U	0.025	0.012	ug/L		11/02/20 07:28	11/03/20 16:40	1
Perfluoroheptanoic acid (PFHpA)	0.015	J	0.025	0.011	ug/L		11/02/20 07:28	11/03/20 16:40	1
Perfluorohexanoic acid (PFHxA)	0.056		0.017	0.0066	ug/L		11/02/20 07:28	11/03/20 16:40	1
Perfluorononanoic acid (PFNA)	0.0062	U	0.033	0.0062	ug/L		11/02/20 07:28	11/03/20 16:40	1
Perfluorooctanoic acid (PFOA)	0.037		0.017	0.0081	ug/L		11/02/20 07:28	11/03/20 16:40	1
Perfluorooctane sulfonate (PFOS)	0.024	J	0.025	0.011	ug/L		11/02/20 07:28	11/03/20 16:40	1
Perfluoropentanoic acid (PFPA)	0.078		0.025	0.0091	ug/L		11/02/20 07:28	11/03/20 16:40	1
Perfluorotetradecanoic acid (PFTeA)	0.012	U	0.025	0.012	ug/L		11/02/20 07:28	11/03/20 16:40	1
Perfluorotridecanoic acid (PFTriA)	0.015	U	0.033	0.015	ug/L		11/02/20 07:28	11/03/20 16:40	1
Perfluoroundecanoic acid (PFUnA)	0.0057	U	0.017	0.0057	ug/L		11/02/20 07:28	11/03/20 16:40	1
Perfluorobutanesulfonic acid (PFBS)	0.13		0.017	0.0069	ug/L		11/02/20 07:28	11/03/20 16:40	1
Perfluorodecanesulfonic acid (PFDS)	0.0076	U	0.017	0.0076	ug/L		11/02/20 07:28	11/03/20 16:40	1
Perfluorohexanesulfonic acid (PFHxS)	0.0058	U	0.025	0.0058	ug/L		11/02/20 07:28	11/03/20 16:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 PFOA	105		60 - 155				11/02/20 07:28	11/03/20 16:40	1
13C8 PFOS	96		45 - 130				11/02/20 07:28	11/03/20 16:40	1

