

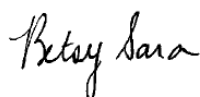
ANALYTICAL REPORT

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Laboratory Job ID: 280-143583-1
Client Project/Site: Gadsden PFC Sampling

For:
Gadsden Water Works
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Gadsden, Alabama 35901

Attn: Mike Lankford



Authorized for release by:
12/22/2020 9:34:23 AM

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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: 280-143583-1

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 12/9/2020 10:00 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.2° C.

PERFLUORINATED HYDROCARBONS (PFC)

Samples GADSDEN-RW (280-143583-1) and GADSDEN-FW (280-143583-2) were analyzed for Perfluorinated Hydrocarbons (PFC) in accordance with SOP DV-LC-0012. The samples were prepared on 12/18/2020 and analyzed on 12/21/2020.

Method DV-LC-0012: The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method recommended limit: GADSDEN-RW (280-143583-1) and GADSDEN-FW (280-143583-2). 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 samples. preparation batch 280-520935 and analytical batch 280-521232 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: 280-143583-1

Client Sample ID: GADSDEN-RW

Lab Sample ID: 280-143583-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	0.089		0.017	0.0071	ug/L	1		DV-LC-0012	Total/NA
Perfluorobutanoic acid (PFBA)	0.018		0.017	0.0084	ug/L	1		DV-LC-0012	Total/NA
Perfluorohexanoic acid (PFHxA)	0.037		0.017	0.0068	ug/L	1		DV-LC-0012	Total/NA
Perfluorooctane sulfonate (PFOS)	0.033		0.026	0.011	ug/L	1		DV-LC-0012	Total/NA
Perfluorooctanoic acid (PFOA)	0.029		0.017	0.0084	ug/L	1		DV-LC-0012	Total/NA
Perfluoropentanoic acid (PFPA)	0.065		0.026	0.0094	ug/L	1		DV-LC-0012	Total/NA

Client Sample ID: GADSDEN-FW

Lab Sample ID: 280-143583-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	0.087		0.016	0.0068	ug/L	1		DV-LC-0012	Total/NA
Perfluorobutanoic acid (PFBA)	0.015	J	0.016	0.0081	ug/L	1		DV-LC-0012	Total/NA
Perfluorohexanoic acid (PFHxA)	0.036		0.016	0.0065	ug/L	1		DV-LC-0012	Total/NA
Perfluorooctane sulfonate (PFOS)	0.026		0.025	0.011	ug/L	1		DV-LC-0012	Total/NA
Perfluorooctanoic acid (PFOA)	0.023		0.016	0.0081	ug/L	1		DV-LC-0012	Total/NA
Perfluoropentanoic acid (PFPA)	0.051		0.025	0.0090	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: 280-143583-1

Method: DV-LC-0012 - Fluorinated Alkyl Substances

Client Sample ID: GADSDEN-RW

Date Collected: 12/07/20 20:18

Date Received: 12/09/20 10:00

Lab Sample ID: 280-143583-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	0.089		0.017	0.0071	ug/L		12/18/20 06:54	12/21/20 11:01	1
Perfluorobutanoic acid (PFBA)	0.018		0.017	0.0084	ug/L		12/18/20 06:54	12/21/20 11:01	1
Perfluorodecanesulfonic acid (PFDS)	0.0079	U	0.017	0.0079	ug/L		12/18/20 06:54	12/21/20 11:01	1
Perfluorodecanoic acid (PFDA)	0.0067	U	0.017	0.0067	ug/L		12/18/20 06:54	12/21/20 11:01	1
Perfluorododecanoic acid (PFDoA)	0.013	U	0.026	0.013	ug/L		12/18/20 06:54	12/21/20 11:01	1
Perfluoroheptanoic acid (PFHpA)	0.011	U	0.026	0.011	ug/L		12/18/20 06:54	12/21/20 11:01	1
Perfluorohexanesulfonic acid (PFHxS)	0.0060	U	0.026	0.0060	ug/L		12/18/20 06:54	12/21/20 11:01	1
Perfluorohexanoic acid (PFHxA)	0.037		0.017	0.0068	ug/L		12/18/20 06:54	12/21/20 11:01	1
Perfluorononanoic acid (PFNA)	0.0065	U	0.034	0.0065	ug/L		12/18/20 06:54	12/21/20 11:01	1
Perfluorooctane sulfonate (PFOS)	0.033		0.026	0.011	ug/L		12/18/20 06:54	12/21/20 11:01	1
Perfluorooctanoic acid (PFOA)	0.029		0.017	0.0084	ug/L		12/18/20 06:54	12/21/20 11:01	1
Perfluoropentanoic acid (PFPA)	0.065		0.026	0.0094	ug/L		12/18/20 06:54	12/21/20 11:01	1
Perfluorotetradecanoic acid (PFTeA)	0.013	U	0.026	0.013	ug/L		12/18/20 06:54	12/21/20 11:01	1
Perfluorotridecanoic acid (PFTriA)	0.015	U	0.034	0.015	ug/L		12/18/20 06:54	12/21/20 11:01	1
Perfluoroundecanoic acid (PFUnA)	0.0059	U	0.017	0.0059	ug/L		12/18/20 06:54	12/21/20 11:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 PFOA	110		60 - 155				12/18/20 06:54	12/21/20 11:01	1
13C8 PFOS	121		45 - 130				12/18/20 06:54	12/21/20 11:01	1

Client Sample ID: GADSDEN-FW

Date Collected: 12/08/20 11:00

Date Received: 12/09/20 10:00

Lab Sample ID: 280-143583-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	0.087		0.016	0.0068	ug/L		12/18/20 06:54	12/21/20 11:10	1
Perfluorobutanoic acid (PFBA)	0.015	J	0.016	0.0081	ug/L		12/18/20 06:54	12/21/20 11:10	1
Perfluorodecanesulfonic acid (PFDS)	0.0075	U	0.016	0.0075	ug/L		12/18/20 06:54	12/21/20 11:10	1
Perfluorodecanoic acid (PFDA)	0.0064	U	0.016	0.0064	ug/L		12/18/20 06:54	12/21/20 11:10	1
Perfluorododecanoic acid (PFDoA)	0.012	U	0.025	0.012	ug/L		12/18/20 06:54	12/21/20 11:10	1
Perfluoroheptanoic acid (PFHpA)	0.011	U	0.025	0.011	ug/L		12/18/20 06:54	12/21/20 11:10	1
Perfluorohexanesulfonic acid (PFHxS)	0.0057	U	0.025	0.0057	ug/L		12/18/20 06:54	12/21/20 11:10	1
Perfluorohexanoic acid (PFHxA)	0.036		0.016	0.0065	ug/L		12/18/20 06:54	12/21/20 11:10	1
Perfluorononanoic acid (PFNA)	0.0062	U	0.033	0.0062	ug/L		12/18/20 06:54	12/21/20 11:10	1
Perfluorooctane sulfonate (PFOS)	0.026		0.025	0.011	ug/L		12/18/20 06:54	12/21/20 11:10	1
Perfluorooctanoic acid (PFOA)	0.023		0.016	0.0081	ug/L		12/18/20 06:54	12/21/20 11:10	1
Perfluoropentanoic acid (PFPA)	0.051		0.025	0.0090	ug/L		12/18/20 06:54	12/21/20 11:10	1
Perfluorotetradecanoic acid (PFTeA)	0.012	U	0.025	0.012	ug/L		12/18/20 06:54	12/21/20 11:10	1
Perfluorotridecanoic acid (PFTriA)	0.015	U	0.033	0.015	ug/L		12/18/20 06:54	12/21/20 11:10	1
Perfluoroundecanoic acid (PFUnA)	0.0057	U	0.016	0.0057	ug/L		12/18/20 06:54	12/21/20 11:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 PFOA	108		60 - 155				12/18/20 06:54	12/21/20 11:10	1
13C8 PFOS	114		45 - 130				12/18/20 06:54	12/21/20 11:10	1

Eurofins TestAmerica, Denver

Surrogate Summary

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

Job ID: 280-143583-1

Method: DV-LC-0012 - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	C8PFOA (60-155)	C8PFOS (45-130)
280-143583-1	GADSDEN-RW	110	121
280-143583-2	GADSDEN-FW	108	114
DLCK 280-500633/14	Lab Control Sample	108	91
LCS 280-520935/2-A	Lab Control Sample	106	122
LCSD 280-520935/3-A	Lab Control Sample Dup	107	124
MB 280-520935/1-A	Method Blank	108	114

Surrogate Legend

C8PFOA = 13C8 PFOA

C8PFOS = 13C8 PFOS