

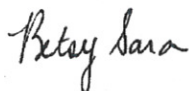
ANALYTICAL REPORT

Eurofins TestAmerica, Denver
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Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-141646-1
Client Project/Site: Gadsden PFC Sampling

For:
Gadsden Water Works
515 Albert Rains Blvd
Gadsden, Alabama 35901

Attn: Mike Lankford



Authorized for release by:
10/23/2020 8:45:39 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

Job ID: 280-141646-1

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Laboratory: Eurofins TestAmerica, Denver

Narrative

CASE NARRATIVE

Client: Gadsden Water Works

Project: Gadsden PFC Sampling

Report Number: 280-141646-1

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 10/15/2020 9:20 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.5° C.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): GADSDEN-RAW. The container labels list a sample collection time of 19:40, While the COC lists 21:20. The sample was logged per the COC. The client was notified.

Sample collection times were not listed on the container labels for samples DISCHARGE and GADSDEN-FW. The client was notified.

PERFLUORINATED HYDROCARBONS (PFC)

Samples DISCHARGE (280-141646-1), GADSDEN-RAW (280-141646-2) and GADSDEN-FW (280-141646-3) were analyzed for Perfluorinated Hydrocarbons (PFC) in accordance with SOP DV-LC-0012. The samples were prepared on 10/17/2020 and analyzed on 10/20/2020.

Method DV-LC-0012: The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method recommended limit: DISCHARGE (280-141646-1), GADSDEN-RAW (280-141646-2) and GADSDEN-FW (280-141646-3). 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 280-512995 and analytical batch 280-513405 PFC.

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: 280-141646-1

Client Sample ID: DISCHARGE

Lab Sample ID: 280-141646-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	0.17		0.017	0.0069	ug/L	1		DV-LC-0012	Total/NA
Perfluorobutanoic acid (PFBA)	0.023		0.017	0.0083	ug/L	1		DV-LC-0012	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.014	J	0.025	0.011	ug/L	1		DV-LC-0012	Total/NA
Perfluorohexanoic acid (PFHxA)	0.045		0.017	0.0067	ug/L	1		DV-LC-0012	Total/NA
Perfluorooctane sulfonate (PFOS)	0.031		0.025	0.011	ug/L	1		DV-LC-0012	Total/NA
Perfluorooctanoic acid (PFOA)	0.034		0.017	0.0082	ug/L	1		DV-LC-0012	Total/NA
Perfluoropentanoic acid (PFPA)	0.075		0.025	0.0092	ug/L	1		DV-LC-0012	Total/NA

Client Sample ID: GADSDEN-RAW

Lab Sample ID: 280-141646-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	0.22		0.018	0.0074	ug/L	1		DV-LC-0012	Total/NA
Perfluorobutanoic acid (PFBA)	0.027		0.018	0.0088	ug/L	1		DV-LC-0012	Total/NA
Perfluorodecanoic acid (PFDA)	0.0080	J	0.018	0.0070	ug/L	1		DV-LC-0012	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.015	J	0.027	0.012	ug/L	1		DV-LC-0012	Total/NA
Perfluorohexanoic acid (PFHxA)	0.051		0.018	0.0071	ug/L	1		DV-LC-0012	Total/NA
Perfluorooctane sulfonate (PFOS)	0.078		0.027	0.012	ug/L	1		DV-LC-0012	Total/NA
Perfluorooctanoic acid (PFOA)	0.040		0.018	0.0088	ug/L	1		DV-LC-0012	Total/NA
Perfluoropentanoic acid (PFPA)	0.081		0.027	0.0098	ug/L	1		DV-LC-0012	Total/NA

Client Sample ID: GADSDEN-FW

Lab Sample ID: 280-141646-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	0.14		0.016	0.0067	ug/L	1		DV-LC-0012	Total/NA
Perfluorobutanoic acid (PFBA)	0.022		0.016	0.0080	ug/L	1		DV-LC-0012	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.011	J	0.024	0.011	ug/L	1		DV-LC-0012	Total/NA
Perfluorohexanoic acid (PFHxA)	0.044		0.016	0.0064	ug/L	1		DV-LC-0012	Total/NA
Perfluorooctane sulfonate (PFOS)	0.020	J	0.024	0.011	ug/L	1		DV-LC-0012	Total/NA
Perfluorooctanoic acid (PFOA)	0.027		0.016	0.0079	ug/L	1		DV-LC-0012	Total/NA
Perfluoropentanoic acid (PFPA)	0.068		0.024	0.0089	ug/L	1		DV-LC-0012	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Denver



Method Summary

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

Job ID: 280-141646-1

Method	Method Description	Protocol	Laboratory
DV-LC-0012	Fluorinated Alkyl Substances	TAL-DEN	TAL DEN
3535	Solid-Phase Extraction (SPE)	SW846	TAL DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-DEN = TestAmerica Laboratories, Denver, Facility Standard Operating Procedure.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100



Sample Summary

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

Job ID: 280-141646-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
280-141646-1	DISCHARGE	Water	10/14/20 08:00	10/15/20 09:20	
280-141646-2	GADSDEN-RAW	Water	10/13/20 21:20	10/15/20 09:20	
280-141646-3	GADSDEN-FW	Water	10/14/20 11:00	10/15/20 09:20	

- 1
- 2
- 3
- 4
- 5
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- 8
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- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

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

Job ID: 280-141646-1

Method: DV-LC-0012 - Fluorinated Alkyl Substances

Client Sample ID: DISCHARGE						Lab Sample ID: 280-141646-1			
Date Collected: 10/14/20 08:00						Matrix: Water			
Date Received: 10/15/20 09:20									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	0.17		0.017	0.0069	ug/L		10/17/20 17:19	10/20/20 15:47	1
Perfluorobutanoic acid (PFBA)	0.023		0.017	0.0083	ug/L		10/17/20 17:19	10/20/20 15:47	1
Perfluorodecanesulfonic acid (PFDS)	0.0077	U	0.017	0.0077	ug/L		10/17/20 17:19	10/20/20 15:47	1
Perfluorodecanoic acid (PFDA)	0.0066	U	0.017	0.0066	ug/L		10/17/20 17:19	10/20/20 15:47	1
Perfluorododecanoic acid (PFDoA)	0.013	U	0.025	0.013	ug/L		10/17/20 17:19	10/20/20 15:47	1
Perfluoroheptanoic acid (PFHpA)	0.014	J	0.025	0.011	ug/L		10/17/20 17:19	10/20/20 15:47	1
Perfluorohexanesulfonic acid (PFHxS)	0.0059	U	0.025	0.0059	ug/L		10/17/20 17:19	10/20/20 15:47	1
Perfluorohexanoic acid (PFHxA)	0.045		0.017	0.0067	ug/L		10/17/20 17:19	10/20/20 15:47	1
Perfluorononanoic acid (PFNA)	0.0063	U	0.034	0.0063	ug/L		10/17/20 17:19	10/20/20 15:47	1
Perfluorooctane sulfonate (PFOS)	0.031		0.025	0.011	ug/L		10/17/20 17:19	10/20/20 15:47	1
Perfluorooctanoic acid (PFOA)	0.034		0.017	0.0082	ug/L		10/17/20 17:19	10/20/20 15:47	1
Perfluoropentanoic acid (PFPA)	0.075		0.025	0.0092	ug/L		10/17/20 17:19	10/20/20 15:47	1
Perfluorotetradecanoic acid (PFTeA)	0.012	U	0.025	0.012	ug/L		10/17/20 17:19	10/20/20 15:47	1
Perfluorotridecanoic acid (PFTriA)	0.015	U	0.034	0.015	ug/L		10/17/20 17:19	10/20/20 15:47	1
Perfluoroundecanoic acid (PFUnA)	0.0058	U	0.017	0.0058	ug/L		10/17/20 17:19	10/20/20 15:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 PFOA	102		60 - 155				10/17/20 17:19	10/20/20 15:47	1
13C8 PFOS	99		45 - 130				10/17/20 17:19	10/20/20 15:47	1

Client Sample ID: GADSDEN-RAW						Lab Sample ID: 280-141646-2			
Date Collected: 10/13/20 21:20						Matrix: Water			
Date Received: 10/15/20 09:20									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	0.22		0.018	0.0074	ug/L		10/17/20 17:19	10/20/20 15:55	1
Perfluorobutanoic acid (PFBA)	0.027		0.018	0.0088	ug/L		10/17/20 17:19	10/20/20 15:55	1
Perfluorodecanesulfonic acid (PFDS)	0.0082	U	0.018	0.0082	ug/L		10/17/20 17:19	10/20/20 15:55	1
Perfluorodecanoic acid (PFDA)	0.0080	J	0.018	0.0070	ug/L		10/17/20 17:19	10/20/20 15:55	1
Perfluorododecanoic acid (PFDoA)	0.013	U	0.027	0.013	ug/L		10/17/20 17:19	10/20/20 15:55	1
Perfluoroheptanoic acid (PFHpA)	0.015	J	0.027	0.012	ug/L		10/17/20 17:19	10/20/20 15:55	1
Perfluorohexanesulfonic acid (PFHxS)	0.0063	U	0.027	0.0063	ug/L		10/17/20 17:19	10/20/20 15:55	1
Perfluorohexanoic acid (PFHxA)	0.051		0.018	0.0071	ug/L		10/17/20 17:19	10/20/20 15:55	1
Perfluorononanoic acid (PFNA)	0.0067	U	0.036	0.0067	ug/L		10/17/20 17:19	10/20/20 15:55	1
Perfluorooctane sulfonate (PFOS)	0.078		0.027	0.012	ug/L		10/17/20 17:19	10/20/20 15:55	1
Perfluorooctanoic acid (PFOA)	0.040		0.018	0.0088	ug/L		10/17/20 17:19	10/20/20 15:55	1
Perfluoropentanoic acid (PFPA)	0.081		0.027	0.0098	ug/L		10/17/20 17:19	10/20/20 15:55	1
Perfluorotetradecanoic acid (PFTeA)	0.013	U	0.027	0.013	ug/L		10/17/20 17:19	10/20/20 15:55	1
Perfluorotridecanoic acid (PFTriA)	0.016	U	0.036	0.016	ug/L		10/17/20 17:19	10/20/20 15:55	1
Perfluoroundecanoic acid (PFUnA)	0.0062	U	0.018	0.0062	ug/L		10/17/20 17:19	10/20/20 15:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 PFOA	102		60 - 155				10/17/20 17:19	10/20/20 15:55	1
13C8 PFOS	95		45 - 130				10/17/20 17:19	10/20/20 15:55	1

Client Sample Results

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

Job ID: 280-141646-1

Method: DV-LC-0012 - Fluorinated Alkyl Substances

Client Sample ID: GADSDEN-FW

Date Collected: 10/14/20 11:00

Date Received: 10/15/20 09:20

Lab Sample ID: 280-141646-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	0.14		0.016	0.0067	ug/L		10/17/20 17:19	10/20/20 16:04	1
Perfluorobutanoic acid (PFBA)	0.022		0.016	0.0080	ug/L		10/17/20 17:19	10/20/20 16:04	1
Perfluorodecanesulfonic acid (PFDS)	0.0074	U	0.016	0.0074	ug/L		10/17/20 17:19	10/20/20 16:04	1
Perfluorodecanoic acid (PFDA)	0.0063	U	0.016	0.0063	ug/L		10/17/20 17:19	10/20/20 16:04	1
Perfluorododecanoic acid (PFDoA)	0.012	U	0.024	0.012	ug/L		10/17/20 17:19	10/20/20 16:04	1
Perfluoroheptanoic acid (PFHpA)	0.011	J	0.024	0.011	ug/L		10/17/20 17:19	10/20/20 16:04	1
Perfluorohexanesulfonic acid (PFHxS)	0.0057	U	0.024	0.0057	ug/L		10/17/20 17:19	10/20/20 16:04	1
Perfluorohexanoic acid (PFHxA)	0.044		0.016	0.0064	ug/L		10/17/20 17:19	10/20/20 16:04	1
Perfluorononanoic acid (PFNA)	0.0061	U	0.032	0.0061	ug/L		10/17/20 17:19	10/20/20 16:04	1
Perfluorooctane sulfonate (PFOS)	0.020	J	0.024	0.011	ug/L		10/17/20 17:19	10/20/20 16:04	1
Perfluorooctanoic acid (PFOA)	0.027		0.016	0.0079	ug/L		10/17/20 17:19	10/20/20 16:04	1
Perfluoropentanoic acid (PFPA)	0.068		0.024	0.0089	ug/L		10/17/20 17:19	10/20/20 16:04	1
Perfluorotetradecanoic acid (PFTeA)	0.012	U	0.024	0.012	ug/L		10/17/20 17:19	10/20/20 16:04	1
Perfluorotridecanoic acid (PFTriA)	0.014	U	0.032	0.014	ug/L		10/17/20 17:19	10/20/20 16:04	1
Perfluoroundecanoic acid (PFUnA)	0.0056	U	0.016	0.0056	ug/L		10/17/20 17:19	10/20/20 16:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 PFOA	100		60 - 155				10/17/20 17:19	10/20/20 16:04	1
13C8 PFOS	93		45 - 130				10/17/20 17:19	10/20/20 16:04	1