

ANALYTICAL REPORT

Eurofins Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-164360-1
Client Project/Site: Gadsden PFAS Sampling

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

Attn: Mike Lankford



Authorized for release by:
8/1/2022 12:05:15 PM

Dylan Bieniulis, Project Manager I
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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 PFAS Sampling

Job ID: 280-164360-1

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Laboratory: Eurofins Denver

Narrative

CASE NARRATIVE

Client: Gadsden Water Works

Project: Gadsden PFAS Sampling

Report Number: 280-164360-1

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 07/13/2022; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 4.8 C.

The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): GADSDEN RW (280-164360-1) and GADSDEN FW (280-164360-2). The container labels list sample IDs of RW and FW, while the COC lists GADSDEN RW & GADSDEN FW respectively. The laboratory logged the sample IDs per the information on the chain of custody. The client was notified on 7/15/2022.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): GADSDEN RW (280-164360-1). The container labels list a collection time of 20:00, while the COC lists 20:11. The laboratory logged the sample collection time per the chain of custody. The client was notified on 7/15/2022.

PERFLUORINATED HYDROCARBONS (PFAS) MOD

Samples GADSDEN RW (280-164360-1) and GADSDEN FW (280-164360-2) were analyzed for Perfluorinated Hydrocarbons (PFAS) MOD in accordance with 537 MOD. The samples were prepared on 07/19/2022 and analyzed on 07/29/2022.

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: 280-164360-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Client Sample ID: GADSDEN RW

Date Collected: 07/11/22 20:11

Date Received: 07/13/22 09:35

Lab Sample ID: 280-164360-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	13		5.5	2.7	ng/L		07/19/22 05:25	07/29/22 02:31	1
Perfluorodecanoic acid (PFDA)	4.2		2.2	0.34	ng/L		07/19/22 05:25	07/29/22 02:31	1
Perfluorododecanoic acid (PFDoA)	0.61	U	2.2	0.61	ng/L		07/19/22 05:25	07/29/22 02:31	1
Perfluoroheptanoic acid (PFHpA)	9.3		2.2	0.28	ng/L		07/19/22 05:25	07/29/22 02:31	1
Perfluorohexanoic acid (PFHxA)	25		2.2	0.64	ng/L		07/19/22 05:25	07/29/22 02:31	1
Perfluorononanoic acid (PFNA)	2.7		2.2	0.30	ng/L		07/19/22 05:25	07/29/22 02:31	1
Perfluorooctanoic acid (PFOA)	25		2.2	0.94	ng/L		07/19/22 05:25	07/29/22 02:31	1
Perfluorooctane sulfonate (PFOS)	35		2.2	0.60	ng/L		07/19/22 05:25	07/29/22 02:31	1
Perfluoropentanoic acid (PFPA)	38		2.2	0.54	ng/L		07/19/22 05:25	07/29/22 02:31	1
Perfluorotetradecanoic acid (PFTeA)	0.81	U	2.2	0.81	ng/L		07/19/22 05:25	07/29/22 02:31	1
Perfluorotridecanoic acid (PFTriA)	1.4	U	2.2	1.4	ng/L		07/19/22 05:25	07/29/22 02:31	1
Perfluoroundecanoic acid (PFUnA)	1.2	U	2.2	1.2	ng/L		07/19/22 05:25	07/29/22 02:31	1
Perfluorobutanesulfonic acid (PFBS)	86		2.2	0.22	ng/L		07/19/22 05:25	07/29/22 02:31	1
Perfluorodecanesulfonic acid (PFDS)	0.35	U	2.2	0.35	ng/L		07/19/22 05:25	07/29/22 02:31	1
Perfluorohexanesulfonic acid (PFHxS)	3.4		2.2	0.63	ng/L		07/19/22 05:25	07/29/22 02:31	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	80		25 - 150	07/19/22 05:25	07/29/22 02:31	1
13C5 PFPeA	93		25 - 150	07/19/22 05:25	07/29/22 02:31	1
13C2 PFHxA	85		25 - 150	07/19/22 05:25	07/29/22 02:31	1
13C4 PFHpA	91		25 - 150	07/19/22 05:25	07/29/22 02:31	1
13C4 PFOA	95		25 - 150	07/19/22 05:25	07/29/22 02:31	1
13C5 PFNA	96		25 - 150	07/19/22 05:25	07/29/22 02:31	1
13C2 PFDA	89		25 - 150	07/19/22 05:25	07/29/22 02:31	1
13C2 PFUnA	78		25 - 150	07/19/22 05:25	07/29/22 02:31	1
13C2 PFDoA	61		25 - 150	07/19/22 05:25	07/29/22 02:31	1
13C2 PFTeDA	70		25 - 150	07/19/22 05:25	07/29/22 02:31	1
13C3 PFBS	85		25 - 150	07/19/22 05:25	07/29/22 02:31	1
18O2 PFHxS	96		25 - 150	07/19/22 05:25	07/29/22 02:31	1
13C4 PFOS	89		25 - 150	07/19/22 05:25	07/29/22 02:31	1

Client Sample ID: GADSDEN FW

Date Collected: 07/12/22 11:00

Date Received: 07/13/22 09:35

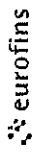
Lab Sample ID: 280-164360-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	16		4.8	2.3	ng/L		07/19/22 05:25	07/29/22 02:41	1
Perfluorodecanoic acid (PFDA)	2.8		1.9	0.30	ng/L		07/19/22 05:25	07/29/22 02:41	1
Perfluorododecanoic acid (PFDoA)	0.53	U	1.9	0.53	ng/L		07/19/22 05:25	07/29/22 02:41	1
Perfluoroheptanoic acid (PFHpA)	9.9		1.9	0.24	ng/L		07/19/22 05:25	07/29/22 02:41	1
Perfluorohexanoic acid (PFHxA)	30		1.9	0.56	ng/L		07/19/22 05:25	07/29/22 02:41	1
Perfluorononanoic acid (PFNA)	1.9		1.9	0.26	ng/L		07/19/22 05:25	07/29/22 02:41	1
Perfluorooctanoic acid (PFOA)	23		1.9	0.82	ng/L		07/19/22 05:25	07/29/22 02:41	1
Perfluorooctane sulfonate (PFOS)	24		1.9	0.52	ng/L		07/19/22 05:25	07/29/22 02:41	1
Perfluoropentanoic acid (PFPA)	52		1.9	0.47	ng/L		07/19/22 05:25	07/29/22 02:41	1
Perfluorotetradecanoic acid (PFTeA)	0.71	U	1.9	0.71	ng/L		07/19/22 05:25	07/29/22 02:41	1
Perfluorotridecanoic acid (PFTriA)	1.3	U	1.9	1.3	ng/L		07/19/22 05:25	07/29/22 02:41	1
Perfluoroundecanoic acid (PFUnA)	1.1	U	1.9	1.1	ng/L		07/19/22 05:25	07/29/22 02:41	1
Perfluorobutanesulfonic acid (PFBS)	110		1.9	0.19	ng/L		07/19/22 05:25	07/29/22 02:41	1

Eurofins Denver

Chain of Custody Record



Client Information		Sampler: MICHAEL BROOKINS Lab PMI: Sara, Beisy A Phone: (256) 543-2884 E-Mail: Beisy.Sara@Eurofinset.com		Carrier Tracking No(s): COC No: 280-98696-29755.1 Page: Page 1 of 1 Job #:	
Company: Gadsden Water Works Address: 515 Albert Rains Blvd City: Gadsden State: AL , Zip: 35901 Phone:		Due Date Requested: TAT Requested (days): PO #:		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Email: mblankford@gadsdenwater.org Project Name: Gadsden PFC Sampling Site:		Project #: 28020645 "PFC Waters" SOW#:		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SOS R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-6 Z - other (specify)	
Sample Identification Sample Date: 7/11/22 Sample Time: 2011 Sample Type (C=comp, G=grab): G Matrix (W=water, G=grab, O=organic): W Preservation Code: W		Field Filtered Sample (Yes or No): N Total Number of Containers: 2		Special Instructions/Note: Turbidity	
Sample Date: 7/12/22 Sample Time: 1100 Sample Type (C=comp, G=grab): G Matrix (W=water, G=grab, O=organic): W Preservation Code: W		Field Filtered Sample (Yes or No): N Total Number of Containers: 2		Special Instructions/Note: 280-184360 Chain of Custody	
Possible Hazard Identification <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					
Deliverable Requested: I, II, III, IV, Other (specify)					
Empty Kit Relinquished by:					
M BROOKINS TO COOLER Relinquished by:		Date/Time: 7/12/22 Date/Time:		Method of Shipment:	
Relinquished by:		Date/Time:		Received by: W. Blankford Date/Time: 7/13/22 0935 Company: CH2M	
Relinquished by:		Date/Time:		Received by:	
Custody Seals Intact: 1984260 Δ Yes Δ No		Custody Seal No.: 1984260		Cooler Temperature(s) °C and Other Remarks: 47 CF01 JRP	

GADSDEN WATER WORKS
(256) 543-2884
525 ALBERT RAINS BLVD
GADSDEN AL 35901

18 LBS

2 OF 2

DWT: 15, 13, 12

SHIP TO:

SARA, BETSY
(303) 736-0100
TEST AMERICA
4955 YARROW ST
ARVADA CO 80002-4517



CO 802 9-30



UPS NEXT DAY AIR

TRACKING #: 1Z 336 988 01 6336 8417

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BILLING: P/P

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WB 22.D.17 Z

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Environment Testing
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280-164360 Waybill

Eurofins Denver
4955 Yarrow Street
Arvada, CO 80002
Phone 303-736-0100 Fax 303-431-7171

Chain of Custody Record



Environment Testing
America



Client Information (Sub Contract Lab)			Lab PM Bleniulis, Dylan T		Carrier Tracking No(s) 280-622123.1	
Shipping/Receiving			E-Mail Dylan.Bleniulis@et.eurofins.com		Page 1 of 1	
Eurofins Environment Testing Northern Ca			State of Origin Alabama		Job # 280-164360-1	
Address 880 Riverside Parkway, City West Sacramento State, Zip CA, 95605 Phone 916-373-5600(Tel) 916-372-1059(Fax) Email			Accreditations Required (See note)		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - Nitric Acid F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Due Date Requested: 7/27/2022			Analysis Requested		M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)	
TAT Requested (days):			Total Number of Containers			
PO #						
IWO #						
Project # 28020645						
SSOW #						
Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Sewage, Stormwater, On-site, A-A-J)	Field Filtered Sample (Yes or No)	Performance M/MSD (Yes or No)	Special Instructions/Notes
7/11/22	20 11 Central	Water		X	X	
7/12/22	11:00 Central	Water		X	X	
<p>Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.</p>						
<p>Possible Hazard Identification Unconfirmed Deliverable Requested I, II, III, IV, Other (specify) Primary Deliverable Rank 4 Empty Kit Relinquished by: _____ Date: _____</p>						
Relinquished by: <i>Take the Quizzes</i>			Company: <i>ETA Denver</i>		Date/Time: <i>7/5/22 4:25pm</i>	
Relinquished by: _____			Company: _____		Date/Time: <i>7-16-22 0900</i>	
Relinquished by: _____			Company: _____		Date/Time: _____	
Custody Seal Intact <input type="checkbox"/> Yes <input type="checkbox"/> No			Custody Seal No. <i>508</i>		Cooler Temperature(s) °C and Other Remarks	

Login Sample Receipt Checklist

Client: Gadsden Water Works

Job Number: 280-164360-1

Login Number: 164360

List Source: Eurofins Denver

List Number: 1

Creator: Rystrom, Joshua R

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.	False	Refer to Job Narrative for details.
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Login Sample Receipt Checklist

Client: Gadsden Water Works

Job Number: 280-164360-1

Login Number: 164360

List Number: 2

Creator: Guzman, Juan

List Source: Eurofins Sacramento

List Creation: 07/16/22 10:48 AM

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	Seal present with no number.
Sample custody seals, if present, are intact.	N/A	
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	0.8
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?	False	Received project as a subcontract.
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 $<6\text{mm}$ ($1/4''$).	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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