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# ANALYTICAL REPORT

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

Laboratory Job ID: 280-156646-1
Client Project/Site: Gadsden PFC Sampling

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

Attn: Mike Lankford

Betsy Sara

*Authorized for release by:*
*12/16/2021 5:13:03 PM*

Betsy Sara, Project Manager II
(303)736-0189
Betsy.Sara@Eurofinset.com

## Job ID: 280-156646-1

### Laboratory: Eurofins TestAmerica, Denver

**Narrative**

**CASE NARRATIVE**

**Client: Gadsden Water Works**

**Project: Gadsden PFC Sampling**

**Report Number: 280-156646-1**

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 12/09/2021; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 1.3 C.

**PERFLUORINATED HYDROCARBONS (PFC)**

Samples Gadsden - RW (280-156646-1) and Gadsden - FW (280-156646-2) were analyzed for Perfluorinated Hydrocarbons (PFC) in accordance with SOP DV-LC-0012. The samples were prepared on 12/13/2021 and analyzed on 12/14/2021.

No 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: 280-156646-1

## Client Sample ID: Gadsden - RW

Lab Sample ID: 280-156646-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanesulfonic acid (PFBS) | 0.092 | | 0.017 | 0.0068 | ug/L | 1 | | DV-LC-0012 | Total/NA |
| Perfluorobutanoic acid (PFBA) | 0.014 | J | 0.017 | 0.0081 | ug/L | 1 | | DV-LC-0012 | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 0.026 | | 0.017 | 0.0066 | ug/L | 1 | | DV-LC-0012 | Total/NA |
| Perfluorooctane sulfonate (PFOS) | 0.023 | J | 0.025 | 0.011 | ug/L | 1 | | DV-LC-0012 | Total/NA |
| Perfluorooctanoic acid (PFOA) | 0.023 | | 0.017 | 0.0081 | ug/L | 1 | | DV-LC-0012 | Total/NA |
| Perfluoropentanoic acid (PFPA) | 0.045 | | 0.025 | 0.0090 | ug/L | 1 | | DV-LC-0012 | Total/NA |

## Client Sample ID: Gadsden - FW

Lab Sample ID: 280-156646-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|---|---|---|---|---|---|---|---|---|---|
| Perfluorobutanesulfonic acid (PFBS) | 0.046 | | 0.016 | 0.0065 | ug/L | 1 | | DV-LC-0012 | Total/NA |
| Perfluorobutanoic acid (PFBA) | 0.012 | J | 0.016 | 0.0077 | ug/L | 1 | | DV-LC-0012 | Total/NA |
| Perfluorohexanoic acid (PFHxA) | 0.013 | J | 0.016 | 0.0062 | ug/L | 1 | | DV-LC-0012 | Total/NA |
| Perfluorooctane sulfonate (PFOS) | 0.013 | J | 0.024 | 0.010 | ug/L | 1 | | DV-LC-0012 | Total/NA |
| Perfluorooctanoic acid (PFOA) | 0.012 | J | 0.016 | 0.0077 | ug/L | 1 | | DV-LC-0012 | Total/NA |
| Perfluoropentanoic acid (PFPA) | 0.024 | | 0.024 | 0.0086 | ug/L | 1 | | DV-LC-0012 | Total/NA |

This Detection Summary does not include radiochemical test results.

## Method: DV-LC-0012 - Fluorinated Alkyl Substances

**Client Sample ID: Gadsden - RW**
**Date Collected: 12/07/21 20:15**
**Date Received: 12/09/21 10:10**

**Lab Sample ID: 280-156646-1**
**Matrix: Water**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanesulfonic acid (PFBS)** | **0.092** | | 0.017 | 0.0068 | ug/L | | 12/13/21 14:14 | 12/14/21 10:20 | 1 |
| **Perfluorobutanoic acid (PFBA)** | **0.014** | **J** | 0.017 | 0.0081 | ug/L | | 12/13/21 14:14 | 12/14/21 10:20 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 0.0076 | U | 0.017 | 0.0076 | ug/L | | 12/13/21 14:14 | 12/14/21 10:20 | 1 |
| Perfluorodecanoic acid (PFDA) | 0.0065 | U | 0.017 | 0.0065 | ug/L | | 12/13/21 14:14 | 12/14/21 10:20 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.012 | U | 0.025 | 0.012 | ug/L | | 12/13/21 14:14 | 12/14/21 10:20 | 1 |
| Perfluoroheptanoic acid (PFHpA) | 0.011 | U | 0.025 | 0.011 | ug/L | | 12/13/21 14:14 | 12/14/21 10:20 | 1 |
| Perfluorohexanesulfonic acid (PFHxS) | 0.0058 | U | 0.025 | 0.0058 | ug/L | | 12/13/21 14:14 | 12/14/21 10:20 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **0.026** | | 0.017 | 0.0066 | ug/L | | 12/13/21 14:14 | 12/14/21 10:20 | 1 |
| Perfluorononanoic acid (PFNA) | 0.0062 | U | 0.033 | 0.0062 | ug/L | | 12/13/21 14:14 | 12/14/21 10:20 | 1 |
| **Perfluorooctane sulfonate (PFOS)** | **0.023** | **J** | 0.025 | 0.011 | ug/L | | 12/13/21 14:14 | 12/14/21 10:20 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **0.023** | | 0.017 | 0.0081 | ug/L | | 12/13/21 14:14 | 12/14/21 10:20 | 1 |
| **Perfluoropentanoic acid (PFPA)** | **0.045** | | 0.025 | 0.0090 | ug/L | | 12/13/21 14:14 | 12/14/21 10:20 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 0.012 | U | 0.025 | 0.012 | ug/L | | 12/13/21 14:14 | 12/14/21 10:20 | 1 |
| Perfluorotridecanoic acid (PFTriA) | 0.015 | U | 0.033 | 0.015 | ug/L | | 12/13/21 14:14 | 12/14/21 10:20 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 0.0057 | U | 0.017 | 0.0057 | ug/L | | 12/13/21 14:14 | 12/14/21 10:20 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C8 PFOA* | *102* | | *60 - 155* | *12/13/21 14:14* | *12/14/21 10:20* | *1* |
| *13C8 PFOS* | *103* | | *45 - 130* | *12/13/21 14:14* | *12/14/21 10:20* | *1* |

**Client Sample ID: Gadsden - FW**
**Date Collected: 12/08/21 11:00**
**Date Received: 12/09/21 10:10**

**Lab Sample ID: 280-156646-2**
**Matrix: Water**

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---|---|---|---|---|---|---|---|---|---|
| **Perfluorobutanesulfonic acid (PFBS)** | **0.046** | | 0.016 | 0.0065 | ug/L | | 12/13/21 14:14 | 12/14/21 10:29 | 1 |
| **Perfluorobutanoic acid (PFBA)** | **0.012** | **J** | 0.016 | 0.0077 | ug/L | | 12/13/21 14:14 | 12/14/21 10:29 | 1 |
| Perfluorodecanesulfonic acid (PFDS) | 0.0072 | U | 0.016 | 0.0072 | ug/L | | 12/13/21 14:14 | 12/14/21 10:29 | 1 |
| Perfluorodecanoic acid (PFDA) | 0.0062 | U | 0.016 | 0.0062 | ug/L | | 12/13/21 14:14 | 12/14/21 10:29 | 1 |
| Perfluorododecanoic acid (PFDoA) | 0.012 | U | 0.024 | 0.012 | ug/L | | 12/13/21 14:14 | 12/14/21 10:29 | 1 |
| Perfluoroheptanoic acid (PFHpA) | 0.010 | U | 0.024 | 0.010 | ug/L | | 12/13/21 14:14 | 12/14/21 10:29 | 1 |
| Perfluorohexanesulfonic acid (PFHxS) | 0.0055 | U | 0.024 | 0.0055 | ug/L | | 12/13/21 14:14 | 12/14/21 10:29 | 1 |
| **Perfluorohexanoic acid (PFHxA)** | **0.013** | **J** | 0.016 | 0.0062 | ug/L | | 12/13/21 14:14 | 12/14/21 10:29 | 1 |
| Perfluorononanoic acid (PFNA) | 0.0059 | U | 0.032 | 0.0059 | ug/L | | 12/13/21 14:14 | 12/14/21 10:29 | 1 |
| **Perfluorooctane sulfonate (PFOS)** | **0.013** | **J** | 0.024 | 0.010 | ug/L | | 12/13/21 14:14 | 12/14/21 10:29 | 1 |
| **Perfluorooctanoic acid (PFOA)** | **0.012** | **J** | 0.016 | 0.0077 | ug/L | | 12/13/21 14:14 | 12/14/21 10:29 | 1 |
| **Perfluoropentanoic acid (PFPA)** | **0.024** | | 0.024 | 0.0086 | ug/L | | 12/13/21 14:14 | 12/14/21 10:29 | 1 |
| Perfluorotetradecanoic acid (PFTeA) | 0.012 | U | 0.024 | 0.012 | ug/L | | 12/13/21 14:14 | 12/14/21 10:29 | 1 |
| Perfluorotridecanoic acid (PFTriA) | 0.014 | U | 0.032 | 0.014 | ug/L | | 12/13/21 14:14 | 12/14/21 10:29 | 1 |
| Perfluoroundecanoic acid (PFUnA) | 0.0054 | U | 0.016 | 0.0054 | ug/L | | 12/13/21 14:14 | 12/14/21 10:29 | 1 |

| *Surrogate* | *%Recovery* | *Qualifier* | *Limits* | *Prepared* | *Analyzed* | *Dil Fac* |
|---|---|---|---|---|---|---|
| *13C8 PFOA* | *103* | | *60 - 155* | *12/13/21 14:14* | *12/14/21 10:29* | *1* |
| *13C8 PFOS* | *107* | | *45 - 130* | *12/13/21 14:14* | *12/14/21 10:29* | *1* |

**Eurofins TestAmerica, Denver**
4955 Yarrow Street
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Phone (303) 736-0100 Fax (303) 431-7171

# Chain of Custody Record

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| Client Information | Sampler: Brookins | Lab PM: Sara, Betsy A | Carrier Tracking No(s): | COC No: 280-98696-29755.1 |
|---|---|---|---|---|
| Client Contact: Mike Lankford | Phone: (256) 543-2884 | E-Mail: Betsy.Sara@Eurofinset.com | | Page: Page 1 of 1 |
| Company: Gadsden Water Works | | | | Job #: |
| Address: 515 Albert Rains Blvd | Due Date Requested: | | | |
| City: Gadsden | TAT Requested (days): | | | |
| State, Zip: AL, 35901 | | | | |
| Phone: | PO #: | | | |
| Email: mlankford@gadsdenwater.org | WO #: | | | |
| Project Name: Gadsden PFC Sampling | Project #: 28020645 "PFC Waters" | | | |
| Site: Gadsden | SSOW#: | | | |

**Analysis Requested**

**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, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

| Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | PFCs | Total Number of containers | TURBIDITY - 8 |
|---|---|---|---|---|---|---|---|---|---|
| | | | Preservation Code: | | | | N | | |
| Gadsden - RW | 12/7/21 | 2015 | G | W | N | N | X | 2 | |
| Gadsden - FW | 12/8/21 | 1100 | G | W | N | N | X | 2 | |

280-156646 Chain of Custody

**Possible Hazard Identification**
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

| Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: | | |
|---|---|---|---|---|---|
| Michal Brookins to Cooler | 12/8/2021 1120 | Company GWWSB | Received by: | Date/Time: 12/09/2021 1000 | Company STADEN |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |
| Relinquished by: | Date/Time: | Company | Received by: | Date/Time: | Company |

Custody Seals Intact: X△ Yes △ No | Custody Seal No.: 1200844 - 120085

Cooler Temperature(s) °C and Other Remarks: 1.4 I 29 - 0.1

Ver: 01/16/2019

# Login Sample Receipt Checklist

Client: Gadsden Water Works

Job Number: 280-156646-1

**Login Number: 156646**
**List Number: 1**
**Creator: Dubicki, Adam L**

**List Source: Eurofins TestAmerica, Denver**

| Question | Answer | Comment |
|---|---|---|
| Radioactivity wasn't checked or is </= 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. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <6mm (1/4"). | N/A | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |