

ANALYTICAL REPORT

Job Number: 280-88583-1

Job Description: ADEM PFC Sampling Water - Gadsden

For:

Alabama Dept. Environmental Management
2715 Sandlin Road, SW
Decatur, AL 35603
Attention: Mr. Ed Poolos



Approved for release.
Stephanie K Rothmeyer
Project Manager I
10/7/2016 10:54 AM

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10/07/2016

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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Definitions/Glossary

Client: Alabama Dept. Environmental Management
Project/Site: ADEM PFC Sampling Water - Gadsden

TestAmerica Job ID: 280-88583-1

Qualifiers

LCMS

Qualifier	Qualifier Description
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Alabama Dept. Environmental Management

Project: ADEM PFC Sampling Water - Gadsden

Report Number: 280-88583-1

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 9/24/2016 at 7:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.4° C and 0.6° C.

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): RW (280-88583-1). The container labels list GWWSB-RAW, while the COC lists RW (280-88583-1). The sample was logged per the COC. The containers were matched to the sample ID based on sample collection time.

The container label for the following samples did not match the information listed on the Chain-of-Custody (COC): MIEX (280-88583-2), BASIN (280-88583-3) and FILTER (280-88583-4). The container labels list GWWSB- prior to the Sample ID listed on the COC, while the COC lists MIEX (280-88583-2), BASIN (280-88583-3) and FILTER (280-88583-4). The samples were logged per the COC.

PERFLUORINATED HYDROCARBONS (PFC)

Samples RW (280-88583-1), MIEX (280-88583-2), BASIN (280-88583-3), FILTER (280-88583-4), BETWEEN CW (280-88583-5) and GADSDEN-FINISHED (280-88583-6) were analyzed for Perfluorinated Hydrocarbons (PFC) in accordance with SOP DV-LC-0012. The samples were prepared on 09/30/2016 and analyzed on 10/03/2016.

Internal standard PFD_oA failed low in the LCSD. The associated target analytes were in control. The samples in the associated batch were non-detect for the analytes associated with the IS. The IS failed low in the samples as well, but the low IS recovery would result in a high biased result. Since the target analytes have low internal standard recovery and non-detect results for associated analytes, the samples are reported as is. The following samples are impacted: RW (280-88583-1), MIEX (280-88583-2), BASIN (280-88583-3), FILTER (280-88583-4), BETWEEN CW (280-88583-5), GADSDEN-FINISHED (280-88583-6)

During the solid phase extraction process, the following sample clogged the cartridge; therefore, the volumes of internal standard were adjusted for the volume of sample extracted: RW (280-88583-1). As such, reporting limits (RLs) are not impacted.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERFLUOROCTANE SULFONAMIDE (FOSA)

Samples RW (280-88583-1), MIEX (280-88583-2), BASIN (280-88583-3), FILTER (280-88583-4), BETWEEN CW (280-88583-5) and GADSDEN-FINISHED (280-88583-6) were analyzed for Perfluorooctane Sulfonamide (FOSA) in accordance with SOP DV-LC-0012. The samples were prepared on 10/04/2016 and analyzed on 10/06/2016.

The internal standard (IS) recovery for the following samples was outside control limits: BASIN (280-88583-3), FILTER (280-88583-4), BETWEEN CW (280-88583-5), GADSDEN-FINISHED (280-88583-6), (LCS 280-345011/2-A), (LCSD 280-345011/3-A), (MB 280-345011/1-A). Evidence of matrix interferences is not obvious. The LCS/LCSD target recovery is in control. The low IS %R would bias the target results high. The associated samples results are ND; therefore, the results will be reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client Sample Results

Client: Alabama Dept. Environmental Management
Project/Site: ADEM PFC Sampling Water - Gadsden

TestAmerica Job ID: 280-88583-1

Client Sample ID: RW

Lab Sample ID: 280-88583-1

Date Collected: 09/20/16 19:48

Matrix: Water

Date Received: 09/24/16 07:20

Method: DV-LC-0012 - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutane Sulfonate (PFBS)	0.064	I	0.021	0.0085	ug/L		09/30/16 12:30	10/03/16 16:09	1
Perfluorobutanoic acid (PFBA)	0.019	J	0.021	0.010	ug/L		09/30/16 12:30	10/03/16 16:09	1
Perfluorodecane sulfonate (PFDS)	0.0094	U	0.021	0.0094	ug/L		09/30/16 12:30	10/03/16 16:09	1
Perfluorodecanoic acid (PFDA)	0.0080	U I	0.021	0.0080	ug/L		09/30/16 12:30	10/03/16 16:09	1
Perfluorododecanoic acid (PFDoA)	0.015	U	0.031	0.015	ug/L		09/30/16 12:30	10/03/16 16:09	1
Perfluoroheptanoic acid (PFHpA)	0.016	J	0.031	0.014	ug/L		09/30/16 12:30	10/03/16 16:09	1
Perfluorohexane Sulfonate (PFHxS)	0.0072	U I	0.031	0.0072	ug/L		09/30/16 12:30	10/03/16 16:09	1
Perfluorohexanoic acid (PFHxA)	0.051		0.021	0.0030	ug/L		09/30/16 12:30	10/03/16 16:09	1
Perfluorononanoic acid (PFNA)	0.018	U I	0.041	0.018	ug/L		09/30/16 12:30	10/03/16 16:09	1
Perfluorooctanoic acid (PFOA)	0.033		0.021	0.010	ug/L		09/30/16 12:30	10/03/16 16:09	1
Perfluorooctane Sulfonate (PFOS)	0.034	I	0.031	0.014	ug/L		09/30/16 12:30	10/03/16 16:09	1
Perfluoropentanoic acid (PFPA)	0.073		0.031	0.011	ug/L		09/30/16 12:30	10/03/16 16:09	1
Perfluorotetradecanoic acid (PFTeA)	0.015	U	0.031	0.015	ug/L		09/30/16 12:30	10/03/16 16:09	1
Perfluorotridecanoic Acid (PFTriA)	0.018	U	0.041	0.018	ug/L		09/30/16 12:30	10/03/16 16:09	1
Perfluoroundecanoic acid (PFUnA)	0.0071	U	0.021	0.0071	ug/L		09/30/16 12:30	10/03/16 16:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 PFOA	111		60 - 155				09/30/16 12:30	10/03/16 16:09	1
13C8 PFOS	117		45 - 130				09/30/16 12:30	10/03/16 16:09	1

Method: PFC -FOSA - FOSA in Water (LC/MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctane Sulfonamide (FOSA)	0.0052	U	0.046	0.0052	ug/L		10/04/16 17:06	10/06/16 10:26	1

Client Sample ID: MIEX

Lab Sample ID: 280-88583-2

Date Collected: 09/20/16 20:40

Matrix: Water

Date Received: 09/24/16 07:20

Method: DV-LC-0012 - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutane Sulfonate (PFBS)	0.061		0.019	0.0079	ug/L		09/30/16 12:30	10/03/16 16:22	1
Perfluorobutanoic acid (PFBA)	0.019		0.019	0.0094	ug/L		09/30/16 12:30	10/03/16 16:22	1
Perfluorodecane sulfonate (PFDS)	0.0088	U	0.019	0.0088	ug/L		09/30/16 12:30	10/03/16 16:22	1
Perfluorodecanoic acid (PFDA)	0.0075	U	0.019	0.0075	ug/L		09/30/16 12:30	10/03/16 16:22	1
Perfluorododecanoic acid (PFDoA)	0.014	U	0.029	0.014	ug/L		09/30/16 12:30	10/03/16 16:22	1
Perfluoroheptanoic acid (PFHpA)	0.014	J	0.029	0.013	ug/L		09/30/16 12:30	10/03/16 16:22	1
Perfluorohexane Sulfonate (PFHxS)	0.0067	U I	0.029	0.0067	ug/L		09/30/16 12:30	10/03/16 16:22	1
Perfluorohexanoic acid (PFHxA)	0.049		0.019	0.0028	ug/L		09/30/16 12:30	10/03/16 16:22	1
Perfluorononanoic acid (PFNA)	0.017	U I	0.038	0.017	ug/L		09/30/16 12:30	10/03/16 16:22	1
Perfluorooctanoic acid (PFOA)	0.029		0.019	0.0094	ug/L		09/30/16 12:30	10/03/16 16:22	1
Perfluorooctane Sulfonate (PFOS)	0.035	I	0.029	0.013	ug/L		09/30/16 12:30	10/03/16 16:22	1
Perfluoropentanoic acid (PFPA)	0.071		0.029	0.010	ug/L		09/30/16 12:30	10/03/16 16:22	1
Perfluorotetradecanoic acid (PFTeA)	0.014	U	0.029	0.014	ug/L		09/30/16 12:30	10/03/16 16:22	1
Perfluorotridecanoic Acid (PFTriA)	0.017	U	0.038	0.017	ug/L		09/30/16 12:30	10/03/16 16:22	1
Perfluoroundecanoic acid (PFUnA)	0.0066	U	0.019	0.0066	ug/L		09/30/16 12:30	10/03/16 16:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 PFOA	108		60 - 155				09/30/16 12:30	10/03/16 16:22	1
13C8 PFOS	124		45 - 130				09/30/16 12:30	10/03/16 16:22	1

Client Sample Results

Client: Alabama Dept. Environmental Management
Project/Site: ADEM PFC Sampling Water - Gadsden

TestAmerica Job ID: 280-88583-1

Client Sample ID: MIEX
Date Collected: 09/20/16 20:40
Date Received: 09/24/16 07:20

Lab Sample ID: 280-88583-2
Matrix: Water

Method: PFC -FOSA - FOSA in Water (LC/MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctane Sulfonamide (FOSA)	0.0052	U	0.046	0.0052	ug/L		10/04/16 17:06	10/06/16 10:38	1

Client Sample ID: BASIN
Date Collected: 09/21/16 06:46
Date Received: 09/24/16 07:20

Lab Sample ID: 280-88583-3
Matrix: Water

Method: DV-LC-0012 - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutane Sulfonate (PFBS)	0.052		0.017	0.0070	ug/L		09/30/16 12:30	10/03/16 16:34	1
Perfluorobutanoic acid (PFBA)	0.019		0.017	0.0083	ug/L		09/30/16 12:30	10/03/16 16:34	1
Perfluorodecane sulfonate (PFDS)	0.0078	U	0.017	0.0078	ug/L		09/30/16 12:30	10/03/16 16:34	1
Perfluorodecanoic acid (PFDA)	0.0067	U I	0.017	0.0067	ug/L		09/30/16 12:30	10/03/16 16:34	1
Perfluorododecanoic acid (PFDoA)	0.013	U	0.026	0.013	ug/L		09/30/16 12:30	10/03/16 16:34	1
Perfluoroheptanoic acid (PFHpA)	0.015	J	0.026	0.011	ug/L		09/30/16 12:30	10/03/16 16:34	1
Perfluorohexane Sulfonate (PFHxS)	0.0059	U	0.026	0.0059	ug/L		09/30/16 12:30	10/03/16 16:34	1
Perfluorohexanoic acid (PFHxA)	0.054		0.017	0.0025	ug/L		09/30/16 12:30	10/03/16 16:34	1
Perfluorononanoic acid (PFNA)	0.015	U	0.034	0.015	ug/L		09/30/16 12:30	10/03/16 16:34	1
Perfluorooctanoic acid (PFOA)	0.030		0.017	0.0083	ug/L		09/30/16 12:30	10/03/16 16:34	1
Perfluorooctane Sulfonate (PFOS)	0.033	I	0.026	0.011	ug/L		09/30/16 12:30	10/03/16 16:34	1
Perfluoropentanoic acid (PFPA)	0.072		0.026	0.0093	ug/L		09/30/16 12:30	10/03/16 16:34	1
Perfluorotetradecanoic acid (PFTeA)	0.013	U	0.026	0.013	ug/L		09/30/16 12:30	10/03/16 16:34	1
Perfluorotridecanoic Acid (PFTriA)	0.015	U	0.034	0.015	ug/L		09/30/16 12:30	10/03/16 16:34	1
Perfluoroundecanoic acid (PFUnA)	0.0059	U	0.017	0.0059	ug/L		09/30/16 12:30	10/03/16 16:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 PFOA	114		60 - 155				09/30/16 12:30	10/03/16 16:34	1
13C8 PFOS	114		45 - 130				09/30/16 12:30	10/03/16 16:34	1

Method: PFC -FOSA - FOSA in Water (LC/MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctane Sulfonamide (FOSA)	0.0050	U	0.044	0.0050	ug/L		10/04/16 17:06	10/06/16 10:50	1

Client Sample ID: FILTER
Date Collected: 09/21/16 07:15
Date Received: 09/24/16 07:20

Lab Sample ID: 280-88583-4
Matrix: Water

Method: DV-LC-0012 - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutane Sulfonate (PFBS)	0.056	I	0.017	0.0069	ug/L		09/30/16 12:30	10/03/16 16:46	1
Perfluorobutanoic acid (PFBA)	0.017		0.017	0.0082	ug/L		09/30/16 12:30	10/03/16 16:46	1
Perfluorodecane sulfonate (PFDS)	0.0077	U	0.017	0.0077	ug/L		09/30/16 12:30	10/03/16 16:46	1
Perfluorodecanoic acid (PFDA)	0.0066	U I	0.017	0.0066	ug/L		09/30/16 12:30	10/03/16 16:46	1
Perfluorododecanoic acid (PFDoA)	0.013	U	0.025	0.013	ug/L		09/30/16 12:30	10/03/16 16:46	1
Perfluoroheptanoic acid (PFHpA)	0.013	J	0.025	0.011	ug/L		09/30/16 12:30	10/03/16 16:46	1
Perfluorohexane Sulfonate (PFHxS)	0.0059	U	0.025	0.0059	ug/L		09/30/16 12:30	10/03/16 16:46	1
Perfluorohexanoic acid (PFHxA)	0.054		0.017	0.0024	ug/L		09/30/16 12:30	10/03/16 16:46	1
Perfluorononanoic acid (PFNA)	0.015	U	0.034	0.015	ug/L		09/30/16 12:30	10/03/16 16:46	1
Perfluorooctanoic acid (PFOA)	0.030		0.017	0.0082	ug/L		09/30/16 12:30	10/03/16 16:46	1
Perfluorooctane Sulfonate (PFOS)	0.034	I	0.025	0.011	ug/L		09/30/16 12:30	10/03/16 16:46	1
Perfluoropentanoic acid (PFPA)	0.070		0.025	0.0092	ug/L		09/30/16 12:30	10/03/16 16:46	1

Client Sample Results

Client: Alabama Dept. Environmental Management
Project/Site: ADEM PFC Sampling Water - Gadsden

TestAmerica Job ID: 280-88583-1

Client Sample ID: FILTER

Date Collected: 09/21/16 07:15

Date Received: 09/24/16 07:20

Lab Sample ID: 280-88583-4

Matrix: Water

Method: DV-LC-0012 - Perfluorinated Hydrocarbons (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotetradecanoic acid (PFTeA)	0.012	U	0.025	0.012	ug/L		09/30/16 12:30	10/03/16 16:46	1
Perfluorotridecanoic Acid (PFTriA)	0.015	U	0.034	0.015	ug/L		09/30/16 12:30	10/03/16 16:46	1
Perfluoroundecanoic acid (PFUnA)	0.0058	U	0.017	0.0058	ug/L		09/30/16 12:30	10/03/16 16:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOA	110		60 - 155	09/30/16 12:30	10/03/16 16:46	1
13C8 PFOS	116		45 - 130	09/30/16 12:30	10/03/16 16:46	1

Method: PFC -FOSA - FOSA in Water (LC/MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctane Sulfonamide (FOSA)	0.0048	U	0.042	0.0048	ug/L		10/04/16 17:06	10/06/16 11:03	1

Client Sample ID: BETWEEN CW

Date Collected: 09/21/16 08:32

Date Received: 09/24/16 07:20

Lab Sample ID: 280-88583-5

Matrix: Water

Method: DV-LC-0012 - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutane Sulfonate (PFBS)	0.058	I	0.017	0.0068	ug/L		09/30/16 12:30	10/03/16 16:59	1
Perfluorobutanoic acid (PFBA)	0.019		0.017	0.0081	ug/L		09/30/16 12:30	10/03/16 16:59	1
Perfluorodecane sulfonate (PFDS)	0.0076	U	0.017	0.0076	ug/L		09/30/16 12:30	10/03/16 16:59	1
Perfluorodecanoic acid (PFDA)	0.0065	U	0.017	0.0065	ug/L		09/30/16 12:30	10/03/16 16:59	1
Perfluorododecanoic acid (PFDoA)	0.012	U	0.025	0.012	ug/L		09/30/16 12:30	10/03/16 16:59	1
Perfluoroheptanoic acid (PFHpA)	0.013	J	0.025	0.011	ug/L		09/30/16 12:30	10/03/16 16:59	1
Perfluorohexane Sulfonate (PFHxS)	0.0058	U I	0.025	0.0058	ug/L		09/30/16 12:30	10/03/16 16:59	1
Perfluorohexanoic acid (PFHxA)	0.055		0.017	0.0024	ug/L		09/30/16 12:30	10/03/16 16:59	1
Perfluorononanoic acid (PFNA)	0.014	U I	0.033	0.014	ug/L		09/30/16 12:30	10/03/16 16:59	1
Perfluorooctanoic acid (PFOA)	0.029		0.017	0.0081	ug/L		09/30/16 12:30	10/03/16 16:59	1
Perfluorooctane Sulfonate (PFOS)	0.036	I	0.025	0.011	ug/L		09/30/16 12:30	10/03/16 16:59	1
Perfluoropentanoic acid (PFPA)	0.071		0.025	0.0091	ug/L		09/30/16 12:30	10/03/16 16:59	1
Perfluorotetradecanoic acid (PFTeA)	0.012	U	0.025	0.012	ug/L		09/30/16 12:30	10/03/16 16:59	1
Perfluorotridecanoic Acid (PFTriA)	0.015	U	0.033	0.015	ug/L		09/30/16 12:30	10/03/16 16:59	1
Perfluoroundecanoic acid (PFUnA)	0.0057	U	0.017	0.0057	ug/L		09/30/16 12:30	10/03/16 16:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOA	112		60 - 155	09/30/16 12:30	10/03/16 16:59	1
13C8 PFOS	122		45 - 130	09/30/16 12:30	10/03/16 16:59	1

Method: PFC -FOSA - FOSA in Water (LC/MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctane Sulfonamide (FOSA)	0.0049	U	0.043	0.0049	ug/L		10/04/16 17:06	10/06/16 11:15	1

Client Sample ID: GADSDEN-FINISHED

Date Collected: 09/21/16 10:00

Date Received: 09/24/16 07:20

Lab Sample ID: 280-88583-6

Matrix: Water

Method: DV-LC-0012 - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutane Sulfonate (PFBS)	0.064		0.018	0.0074	ug/L		09/30/16 12:30	10/03/16 17:11	1
Perfluorobutanoic acid (PFBA)	0.019		0.018	0.0088	ug/L		09/30/16 12:30	10/03/16 17:11	1
Perfluorodecane sulfonate (PFDS)	0.0082	U	0.018	0.0082	ug/L		09/30/16 12:30	10/03/16 17:11	1

TestAmerica Denver

Client Sample Results

Client: Alabama Dept. Environmental Management
 Project/Site: ADEM PFC Sampling Water - Gadsden

TestAmerica Job ID: 280-88583-1

Client Sample ID: GADSDEN-FINISHED

Lab Sample ID: 280-88583-6

Date Collected: 09/21/16 10:00

Matrix: Water

Date Received: 09/24/16 07:20

Method: DV-LC-0012 - Perfluorinated Hydrocarbons (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorodecanoic acid (PFDA)	0.0070	U	0.018	0.0070	ug/L		09/30/16 12:30	10/03/16 17:11	1
Perfluorododecanoic acid (PFDoA)	0.013	U	0.027	0.013	ug/L		09/30/16 12:30	10/03/16 17:11	1
Perfluoroheptanoic acid (PFHpA)	0.014	J	0.027	0.012	ug/L		09/30/16 12:30	10/03/16 17:11	1
Perfluorohexane Sulfonate (PFHxS)	0.0063	U I	0.027	0.0063	ug/L		09/30/16 12:30	10/03/16 17:11	1
Perfluorohexanoic acid (PFHxA)	0.051		0.018	0.0026	ug/L		09/30/16 12:30	10/03/16 17:11	1
Perfluorononanoic acid (PFNA)	0.016	U	0.036	0.016	ug/L		09/30/16 12:30	10/03/16 17:11	1
Perfluorooctanoic acid (PFOA)	0.029		0.018	0.0088	ug/L		09/30/16 12:30	10/03/16 17:11	1
Perfluorooctane Sulfonate (PFOS)	0.035	I	0.027	0.012	ug/L		09/30/16 12:30	10/03/16 17:11	1
Perfluoropentanoic acid (PFPA)	0.070		0.027	0.0098	ug/L		09/30/16 12:30	10/03/16 17:11	1
Perfluorotetradecanoic acid (PFTeA)	0.013	U	0.027	0.013	ug/L		09/30/16 12:30	10/03/16 17:11	1
Perfluorotridecanoic Acid (PFTriA)	0.016	U	0.036	0.016	ug/L		09/30/16 12:30	10/03/16 17:11	1
Perfluoroundecanoic acid (PFUnA)	0.0062	U	0.018	0.0062	ug/L		09/30/16 12:30	10/03/16 17:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 PFOA	113		60 - 155				09/30/16 12:30	10/03/16 17:11	1
13C8 PFOS	118		45 - 130				09/30/16 12:30	10/03/16 17:11	1

Method: PFC -FOSA - FOSA in Water (LC/MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctane Sulfonamide (FOSA)	0.0052	U	0.046	0.0052	ug/L		10/04/16 17:06	10/06/16 11:27	1