

ANALYTICAL REPORT

Job Number: 280-86220-1

Job Description: ADEM PFC Sampling

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
8/25/2016 11:16 AM

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08/25/2016

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The Lab Certification ID# is 4025.

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

TestAmerica Laboratories, Inc.

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Definitions/Glossary

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

TestAmerica Job ID: 280-86220-1

Qualifiers

LCMS

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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)

Client Sample Results

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

TestAmerica Job ID: 280-86220-1

Client Sample ID: GADSDEN-RAW

Lab Sample ID: 280-86220-1

Date Collected: 07/27/16 09:20

Matrix: Water

Date Received: 07/28/16 09:40

Method: DV-LC-0012 - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutane Sulfonate (PFBS)	0.055		0.019	0.0078	ug/L		08/08/16 10:53	08/19/16 22:57	1
Perfluorobutanoic acid (PFBA)	0.013	J	0.019	0.0093	ug/L		08/08/16 10:53	08/19/16 22:57	1
Perfluorodecane sulfonate (PFDS)	0.0087	U	0.019	0.0087	ug/L		08/08/16 10:53	08/19/16 22:57	1
Perfluorodecanoic acid (PFDA)	0.0074	U	0.019	0.0074	ug/L		08/08/16 10:53	08/19/16 22:57	1
Perfluorododecanoic acid (PFDoA)	0.014	U	0.029	0.014	ug/L		08/08/16 10:53	08/19/16 22:57	1
Perfluoroheptanoic acid (PFHpA)	0.015	J	0.029	0.013	ug/L		08/08/16 10:53	08/19/16 22:57	1
Perfluorohexane Sulfonate (PFHxS)	0.0066	U	0.029	0.0066	ug/L		08/08/16 10:53	08/19/16 22:57	1
Perfluorohexanoic acid (PFHxA)	0.045		0.019	0.0028	ug/L		08/08/16 10:53	08/19/16 22:57	1
Perfluorononanoic acid (PFNA)	0.017	U	0.038	0.017	ug/L		08/08/16 10:53	08/19/16 22:57	1
Perfluorooctanoic acid (PFOA)	0.030		0.019	0.0093	ug/L		08/08/16 10:53	08/19/16 22:57	1
Perfluorooctane Sulfonate (PFOS)	0.043		0.029	0.013	ug/L		08/08/16 10:53	08/19/16 22:57	1
Perfluoropentanoic acid (PFPA)	0.062		0.029	0.010	ug/L		08/08/16 10:53	08/19/16 22:57	1
Perfluorotetradecanoic acid (PFTeA)	0.014	U	0.029	0.014	ug/L		08/08/16 10:53	08/19/16 22:57	1
Perfluorotridecanoic Acid (PFTriA)	0.017	U	0.038	0.017	ug/L		08/08/16 10:53	08/19/16 22:57	1
Perfluoroundecanoic acid (PFUnA)	0.0066	U	0.019	0.0066	ug/L		08/08/16 10:53	08/19/16 22:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 PFOA	116		60 - 155				08/08/16 10:53	08/19/16 22:57	1
13C8 PFOS	118		45 - 130				08/08/16 10:53	08/19/16 22:57	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctane Sulfonamide (FOSA)	0.0054	U	0.047	0.0054	ug/L		08/09/16 13:24	08/18/16 09:27	1

Client Sample ID: GADSDEN-FINISHED

Lab Sample ID: 280-86220-2

Date Collected: 07/27/16 09:22

Matrix: Water

Date Received: 07/28/16 09:40

Method: DV-LC-0012 - Perfluorinated Hydrocarbons

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutane Sulfonate (PFBS)	0.057		0.020	0.0082	ug/L		08/08/16 10:53	08/19/16 23:10	1
Perfluorobutanoic acid (PFBA)	0.016	J	0.020	0.0097	ug/L		08/08/16 10:53	08/19/16 23:10	1
Perfluorodecane sulfonate (PFDS)	0.0091	U	0.020	0.0091	ug/L		08/08/16 10:53	08/19/16 23:10	1
Perfluorodecanoic acid (PFDA)	0.0077	U	0.020	0.0077	ug/L		08/08/16 10:53	08/19/16 23:10	1
Perfluorododecanoic acid (PFDoA)	0.015	U	0.030	0.015	ug/L		08/08/16 10:53	08/19/16 23:10	1
Perfluoroheptanoic acid (PFHpA)	0.014	J	0.030	0.013	ug/L		08/08/16 10:53	08/19/16 23:10	1
Perfluorohexane Sulfonate (PFHxS)	0.0069	U	0.030	0.0069	ug/L		08/08/16 10:53	08/19/16 23:10	1
Perfluorohexanoic acid (PFHxA)	0.043		0.020	0.0029	ug/L		08/08/16 10:53	08/19/16 23:10	1
Perfluorononanoic acid (PFNA)	0.017	U	0.040	0.017	ug/L		08/08/16 10:53	08/19/16 23:10	1
Perfluorooctanoic acid (PFOA)	0.029		0.020	0.0097	ug/L		08/08/16 10:53	08/19/16 23:10	1
Perfluorooctane Sulfonate (PFOS)	0.043		0.030	0.013	ug/L		08/08/16 10:53	08/19/16 23:10	1
Perfluoropentanoic acid (PFPA)	0.056		0.030	0.011	ug/L		08/08/16 10:53	08/19/16 23:10	1
Perfluorotetradecanoic acid (PFTeA)	0.015	U	0.030	0.015	ug/L		08/08/16 10:53	08/19/16 23:10	1
Perfluorotridecanoic Acid (PFTriA)	0.018	U	0.040	0.018	ug/L		08/08/16 10:53	08/19/16 23:10	1
Perfluoroundecanoic acid (PFUnA)	0.0068	U	0.020	0.0068	ug/L		08/08/16 10:53	08/19/16 23:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C8 PFOA	115		60 - 155				08/08/16 10:53	08/19/16 23:10	1
13C8 PFOS	124		45 - 130				08/08/16 10:53	08/19/16 23:10	1

Client Sample Results

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

TestAmerica Job ID: 280-86220-1

Client Sample ID: GADSDEN-FINISHED

Lab Sample ID: 280-86220-2

Date Collected: 07/27/16 09:22

Matrix: Water

Date Received: 07/28/16 09:40

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	0.045	0.0052	ug/L		08/09/16 13:24	08/18/16 09:51	1

Method Summary

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

TestAmerica Job ID: 280-86220-1

Method	Method Description	Protocol	Laboratory
DV-LC-0012	Perfluorinated Hydrocarbons	TAL-DEN	TAL DEN
PFC -FOSA	FOSA in Water (LC/MS/MS)	TAL-DEN	TAL DEN

Protocol References:

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

Laboratory References:

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